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THE METHODS OF APPOINTING HOSPITAL INTERNS*

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The many great improvements which have been brought about in recent years in matters of medical education have had to do on the one hand with the preliminary education of the individual, and on the other with the equipment of the schools; that is, their laboratory facilities, clinical material and number of instructors engaged exclusively in teaching and investigation. In regard to these important and fundamental matters definite standards have been established by the better schools, which, as soon as they are widely adopted, will give to medical education a substantial substructure. In order, however, that progress may continue, it is necessary to scrutinize carefully every stage of that training for practice which begins several years before entering a medical school, and ends, not with the conferring of the degree, but, subject to license by the state, with the actual introduction to the responsibilities of practice. A medical school has perhaps accomplished its duty when it confers on students with proper preliminary training a degree which it conscientiously believes to represent the best that can be offered in the way of laboratory and clinical instruction. It may still have many minor problems to settle, as methods of instruction, the relation of research to teaching, the distribution of time between major and minor subjects, and relative value of elective and obligatory work; but the subject now important above all others is that of postgraduate clinical training as a requisite for license. This is indicated in the present general discussion concerning the fifth or hospital year, a discussion originating with the more advanced advocates of medical reform, but now involving to a considerable extent the general public, which is beginning to appreciate that license to practice medicine does not always indicate adequate training for its proper practice, and finally is becoming a matter of serious discussion by state licensing boards. Already Minnesota anticipates the requirement of a fifth year, and Pennsylvania is preparing for the same requirement; other of the more progressive states will doubtless soon follow this lead.

The medical schools must therefore immediately prepare to answer the question shortly to be asked by their students: Where am I to get this fifth year? For the schools with higher requirements and well-organized laboratory and clinical instruction it is not a serious question, for from 80 to 90 per cent. of the graduates of such schools now seek and receive appointments as interns. But something must be done for the remaining 10 to 20 per cent. Many questions arise: Is it possible to substitute for internship a year of concentrated clinical instruction, with of course abundant ward work, in hospitals controlled by the clinical teachers of the school? Will courses in the well-recognized postgraduate schools and hospitals suffice? Are all hospitals to have equal rank before the state board? May a year's work in research or routine work in any one or several of the medical sciences in hospital or school laboratories be substituted for clinical work as intern? For such schools as are located in states looking forward to the hospital year the solution of these questions is an urgent matter; these schools must be prepared, provisionally at least, to meet the changed conditions. The licensing boards cannot expect the schools to find hospital appointments for all their graduates; neither can the state assume this function; but the schools should be prepared to advise their graduates, and the state should clearly define the restrictions as to character of hospital or other work demanded under a fifth-year rule. Doubtless an amicable understanding between schools and state boards will eventually be reached; but much investigation and discussion must precede such understanding. If the medical schools are to aid their graduates in procuring a year of hospital experience it is evident that a large amount of information concerning hospitals must be brought together and made readily available. The number of hospitals available for such postgraduate work, the number of internships in each, the methods of appointment, the character of the service and of the visiting staff in each hospital, the matter of general equipment, the laboratory facilities, the question of whether teaching and investigation are combined with hospital routine and whether or not interns are given work to do which tends to their instruction and proper training or are used as substitutes for nurses and orderlies—all these questions must be answered. It is only one of these questions, though perhaps in many ways the most important, certainly at present the most urgent, that I wish to discuss—the methods of appointing interns.

My interest in the subject, obviously foreign to my usual interests, was first aroused some years ago by a casual discussion among teachers representing several schools in the same city of the results of an examination for interns at a certain hospital. The representative of a school which, though emphasizing practical clinical and laboratory instruction, had not been conspicuously successful in having its students selected, made the statement, "Oh, well, the trouble is that our men are not properly quizzed!" As the hospital in question is one of the best in the community I objected to the theory that "quizzing" is an important feature of proper

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medical education, and expressed my surprise that despite the most thorough theoretical training of their opponents, men with practical laboratory and clinical training should not have made an impression on the examiners. My surprise was increased when I was told that the hospital in question, despite its standing in the community, did not require practical examination of applicants for internship, and furthermore paid little attention to the personality or the character of the academic or professional education of the prospective intern. The test was purely a theoretical oral examination with the examination of one specimen of urine, blood, sputum or whatever other material might conveniently be viewed through a microscope.

As it appeared to me that with such an examination the student was approaching the hospital with the wrong point of view, and moreover that both school and hospital were neglecting a factor which might be used to impress on the student proper ideals in regard not only to methods of medical education but also to the ultimate object of such education, I undertook in view of the near approach of the obligatory hospital year an investigation of the methods of appointing interns in a large number of the hospitals.

I desire to present the results of this investigation in order, first, that the data may be thus made available to those interested in the purely practical side of the subject in its relation to medical education; and second, as material which may be used in bringing about that greater cooperation between medical schools and hospitals which is necessary to the proper fulfilment of the ideal of the hospital year.

Forty hospitals[1] in the United States and Canada were selected as probably representative of different methods of intern appointment. These included the larger municipal hospitals requiring civil service or other examination, university hospitals which select interns on the basis of scholarship, and representative hospitals of large cities and of small communities, with and without medical schools in their immediate vicinity, appointing interns with and without examinations. Also a research hospital, a hospital controlled by a great corporation, a private hospital and a hospital noted for its special work in surgery were included. Replies were received from all but one,[2] and all these replies gave permission to use the information in this report. On the information so obtained the present study is based.

The letter[3] of inquiry follows:

I am interested in obtaining information concerning the character of the examinations for interns in the various important hospitals of this country and Canada; or, in the case of those hospitals which do not require examination, of the factors which determine the selection of interns.

If you have at hand printed matter concerning conditions which must be fulfilled by candidates, will you kindly send me such, and also if possible copies of examination papers, and of clinical and laboratory tests, etc., given in any examination held during the past three years. I am especially desirous of knowing how much weight, on the basis of 100 points is given to (*a*) personality, (*b*) character of academic and professional education, (*c*) theoretical examination, either written or oral, and (*d*) practical (clinical and laboratory) examinations.

Are appointments in your hospital influenced in any way by local or neighboring medical schools, or by other factors, social, political or religious?

As a result of your experience have you any suggestions concerning improvements in the manner of selecting interns?

I enclose addressed stamped envelope for reply, which reply, I trust, will not cause you too much trouble.

The various hospitals fall naturally into two groups, those requiring an examination and those appointing in other ways. The latter will be discussed first.

I. APPOINTMENT, WITHOUT EXAMINATION, TO UNIVERSITY HOSPITALS, OR HOSPITALS AFFILIATED WITH OR CONTROLLED BY MEDICAL SCHOOLS

Under this head come university hospitals proper (Pennsylvania, Michigan, Johns Hopkins), and hospitals which are an integral part of independent medical schools (Jefferson and Medico-Chirurgical of Philadelphia) and hospitals affiliated with or closely controlled by medical schools, as the Maine General Hospital supplied by the Medical School of Maine, the City and County Hospital of San Francisco by the medical schools[4] of San Francisco; the Presbyterian Hospital of Chicago by Rush Medical College; the Toronto General Hospital by the University of Toronto, and the New Haven Hospital by Yale University. The method of selection varies somewhat in its details, but is essentially the same in all these hospitals. The University of Pennsylvania Hospital selects its interns from the group of twenty-five men having the highest standing as determined by the examinations of the first three years of the medical course in its own school. Johns Hopkins selects, in January, twelve men of the class graduating in June, on the basis of "standing in all required subjects, on evidence of special ability as shown by elective or research work and on consideration of special fitness." At Michigan the interns "are usually selected from the senior medical students after the class graduates." Jefferson receives the applications of those members of the graduating class who at the end of the third year had attained an average of 80 per cent. or more for all examinations of the course, and in the final selection is guided by personality, preliminary education and by the results of an oral examination and a test of ability in history-taking. At the Presbyterian Hospital of Chicago "the highest 50 per cent. of the class (Rush Medical College) in rank according to scholarship" are eligible for appointment. From those eligible each member of the staff selects one or more interns for vacancies in his department. The names thus selected after approval by the staff are certified to the board of managers of the hospital. The Toronto General Hospital "is to all intents and purposes a university hospital," and appointments are recommended by the advisory board of the hospital composed of members of the faculty of the University of Toronto; preference is given

1. The Lakeside Hospital and the City Hospital of Cleveland; the Johns Hopkins Hospital, Baltimore; the Cook County Hospital, the Presbyterian Hospital, the Augustana Hospital, the Michael Reese Hospital and St. Luke's Hospital of Chicago; the University Hospital, Ann Arbor, Mich.; St. Mary's Hospital of Rochester, Minn.; the Hospital of the Rockefeller Institute, the New York Hospital, Mount Sinai Hospital, Roosevelt Hospital, St. Luke's Hospital, the Presbyterian Hospital, the City Hospital and Bellevue Hospital of New York; the Pennsylvania Hospital, Jefferson Hospital, the Medico-Chirurgical Hospital, the Hospital of the University of Pennsylvania, Philadelphia General Hospital, Presbyterian Hospital and Episcopal Hospital of Philadelphia; the Cincinnati Hospital of Cincinnati; the Grant Hospital of Columbus, Ohio; the Southern Pacific Company's Hospital and the City and County Hospital, San Francisco; the Montreal General Hospital and the Royal Victoria Hospital of Montreal; the Toronto General Hospital of Toronto; the Massachusetts General Hospital, the Boston City Hospital and the Carney Hospital of Boston; the Rhode Island General Hospital of Providence, R. I.; the Maine General Hospital of Portland, Me.; the New Haven Hospital of New Haven, Conn.; the Albany Hospital of Albany, N. Y., and the Buffalo General Hospital of Buffalo.

2. The only hospital not replying was the Royal Victoria Hospital of Montreal.

3. This letter was sent out in the early summer of 1911.

4. University of California, Leland Stanford University (Cooper), College of Physicians and Surgeons, Hahnemann Medical College of Pacific and San Francisco Polyclinic.

to men having the highest standing in the class. A similar relation exists between the Maine General Hospital and the Medical School of Maine.

The Medico-Chirurgical College of Philadelphia holds an examination, open only to its own students; but the examining committee is "influenced as much by the appearance, alertness and personality of the candidate, as by the answers given." The New Haven Hospital receives applications from members of the senior class of the Yale Medical School, and from this list the committee on interns makes its selection. When such applications are insufficient, appointments are made of men suitably recommended by other schools. Appointments to the San Francisco City and County Hospital are made by the Board of Health on the basis of recommendations by the various schools of the city; these recommendations are presumably on the basis of scholarship. At Cooper Medical College, for example, it has been customary to give the opportunity to apply for these positions to men having the highest examination averages in the undergraduate course.

It is of interest to note that with the exception of the New Haven Hospital, which cannot obtain a sufficient number of interns from the Yale Medical School, and the City and County Hospital of San Francisco, which divides its vacancies among all the schools of the city, each of these hospitals always receives its interns from one school[5] and with the exception of Johns Hopkins Hospital makes no provision for obtaining men of diverse training. The Hopkins provision for obtaining new blood is instructive. On each service Hopkins leaves one appointment vacant, the appointee to be "selected by the responsible head of the service from graduates of this or other schools." This leaves an appointment open, in the words of a correspondent, "for some man recommended by some other school, as we do not believe in too much inbreeding."

II. NON-UNIVERSITY AND NON-AFFILIATED HOSPITALS NOT REQUIRING EXAMINATION

This group includes hospitals of widely varying character; as:

1. Research hospital, as the Hospital of the Rockefeller Institute for Medical Research.

2. Hospital of commercial company, as the Hospital of the Southern Pacific Company, San Francisco, which maintains a magnificent institution for the care of its employees who are sick or injured.

3. Private or semi-private hospitals, as the Grant Hospital of Columbus, Ohio, and St. Mary's Hospital of Rochester, Minn.

4. Charitable hospitals, as the Pennsylvania Hospital of Philadelphia and the St. Luke's Hospital and the Augustana Hospital of Chicago.

The Rockefeller Hospital makes appointments "solely on the basis of (*a*) personality, (*b*) character of education and training, (*c*) nature of hospital work and laboratory training since graduation, (*d*) personal recommendations of those with whom candidates have worked, and (*e*) nature of publications." It is obligatory that candidate should have had previous hospital experience, and preference is given to those who have had special training in some field of medical investigation.

The other hospitals of this group usually appoint after personal interview, or on the recommendation of the faculty of the school in which applicant has studied or of individuals with whom he has been associated. None appears to have a probationary or extern service except the Augustana Hospital, which appoints for a period of three months externs from any school in good standing, and from this group selects its interns. The interns of the Rockefeller Hospital are salaried, as are also, I believe, those of the Hospital of the Southern Pacific Company.

III. HOSPITALS REQUIRING EXAMINATIONS

About one-half of the total number of hospitals[6] to which inquiries were sent make appointments by examination. Of these, three demand a written examination only, three an oral examination only, four a combined written and oral without practical work, while the others (ten) combine with either a written or an oral examination, or both, the examination of patients and the performance of clinical laboratory tests. Thus but one-half recognize the importance of practical examinations, and in some of these practical work counts very little in the final result. Although many hospitals state that personality and character of academic and professional education are considered in selecting interns, others state quite frankly that these factors are not considered and that choice is made purely on the basis of the competitive written examination. In the few instances in which figures have been given the value allotted to personality and general education varies from 10 to 50 points in a total of 100. Several provide specifically that married interns are not eligible, and one at least reserves the right to make, at discretion of its committee, a physical examination of any applicant.

Two hospitals of the group studied require a civil service examination. As these, the Philadelphia General Hospital (known locally as Blockley Hospital) and the Cook County Hospital of Chicago, are representative of our large municipal hospitals which offer many opportunities for postgraduate clinical study and are therefore important factors in the plans for the "hospital year," they may be considered separately.

The Cook County service is limited to the "graduate classes of the various medical colleges in Cook County," and no attention is paid to personality, or to clinical or laboratory tests. The examination covers three days, each applicant answering a set of ten questions on each day. One set of physicians, appointed by the Civil Service Commission, prepares the questions (general medicine and surgery, obstetrics, orthopedic surgery and diseases of eye, ear, nose and throat), and another set examines the papers.

Of the questions offered in the examination of April, 1911, ten can be grouped under the general headings of internal medicine. Of these, six asked for symptomatology or differential diagnosis, and the ground could readily have been covered in a more thorough manner by a practical examination compelling the employment

5. In this connection it may be mentioned that certain other hospitals, though requiring examinations, are in large part supplied by a single school or a group of schools. Thus, in Chicago the Cook County Hospital service is limited to graduates of schools in Cook County and the Michael Reese Hospital of Chicago takes its interns only "from the three medical schools of merit" in Chicago; but both require examinations. The third division of Bellevue Hospital, New York, is supplied exclusively by graduates of New York University and Bellevue Hospital Medical School. The first division is controlled by the College of Physicians and the second by the Cornell Medical School, but both these, as also the fourth division, which is not under collegiate control, are open to graduates of any school. Appointment to all four divisions is, however, based on examination

6. The Presbyterian, Roosevelt, St. Luke's and New York (including Hudson Street Hospital), Mount Sinai and Bellevue of New York; the Philadelphia General, Episcopal and Presbyterian of Philadelphia; the Cook County and Michael Reese of Chicago; the Massachusetts General, Boston City, and Carney of Boston; the Lakeside and Cleveland City of Cleveland; the Rhode Island of Providence; the Montreal General, the Buffalo General, the Albany Hospital and Cincinnati City Hospital.

of the usual methods of clinical and laboratory examination with occasional oral questions.

The ten questions in surgery are quite typical of the usual hospital examination. Instead of attempting to obtain information concerning the applicant's knowledge of surgical diagnosis, surgical cleanliness and the care of the patient before and after operation—matters with which the intern has most to do and concerning his knowledge of which the visiting staff and the hospital trustees should be most solicitous—the questions deal mainly with pathology. I have no desire to minimize the importance of pathology for the surgeon, but in an examination in surgery one expects to see some attempt to find out how much the student knows about the practical problems and procedures of surgery. An attempt should be made to find out what the candidate can do in methods of diagnosis, not how much theoretical knowledge he may have. If hospitals desire the best type of intern, they must support the practical laboratory and clinical teaching of the better schools by offering their applicants for internship the stimulus of practical examination.

At the Philadelphia General Hospital the written questions "form the only subject of the examination, there being no other taken into consideration." The names of individuals passing the examination are published by the Civil Service Commission, and when the director of the Department of Public Health and Charities desires to fill vacancies in the hospital, he makes a requisition on the commission for an appropriate number of names to fill such vacancies. The examination in April, 1911, consisted of ten questions; five involved differential diagnosis, and of these, four could have been used also in a test of laboratory methods. Of the remaining five questions, two, most excellent questions, could readily find a place in a practical examination. The other three, referring to technic of gastro-enterostomy, curettement and the management of normal labor, come under the head of stock questions, which, as they are always expected and prepared for, are of no value in determining past training or fitness for appointment. Such an examination, incapable as it is of determining anything except the extent and thoroughness of the applicant's reading, is open to the same criticism as that of the Cook County Hospital.

In other hospitals which do not attempt a practical examination, the tests for fitness do not differ from those described as typical of civil service examinations. On the other hand, several hospitals make the written or oral examination a means of registering the applicant's knowledge of history-taking, physical examination and clinical laboratory methods. A written or oral report on such practical work as the applicant does is supplemented by questions concerning anatomy, physiology, pathology and treatment. This form of examination cannot be commended too highly.

It is not desirable to single out any one hospital as having a perfect method of appointing interns (indeed, this is impossible, for with the exception of the Rockefeller Hospital, which appoints for definite postinternship clinical research, no institution appears to possess a method entirely satisfactory), but the machinery of the "Joint Hospital Examining Board," which examines for appointment to several of the New York hospitals (New York Hospital including Hudson Street Hospital, Presbyterian Hospital,[7] Roosevelt Hospital and St. Luke's Hospital), is perhaps, at present, the most satisfactory among hospitals appointing by examination. The all-embracing character of this examination and the machinery for weeding out undesirable candidates is indicated in the following extract from the board's circular of information. According to this method, the oral examination (including personality) counts 40, the written examination 60, and the practical examination 50 points in a total of 150.

CIRCULAR[8] OF INFORMATION OF THE JOINT HOSPITAL EXAMINING BOARD OF THE NEW YORK HOSPITAL (AND HUDSON STREET HOSPITAL), PRESBYTERIAN HOSPITAL, ROOSEVELT HOSPITAL, ST. LUKE'S HOSPITAL (READ CAREFULLY AND PRESERVE FOR FUTURE REFERENCE)

I. A competitive examination of candidates for positions on the house staffs of the above-named hospitals will be held in New York City, February 20, 21 and 22. Candidates will meet at the Academy of Medicine, 17 West Forty-Third Street, on February 20 at 9 a. m. for the oral and written examinations. Details of practical examinations will then be announced.

II. The examination will include:

1. A written examination in the subjects of medicine, surgery, therapeutics, surgical and topographic anatomy, pathology and gynecology.

2. An oral examination in medicine and surgery.

3. A practical examination in medicine, surgery and clinical pathology.

III. The successful candidates, in the order of their rating in the examination, will be allowed to make their choice of hospital and service. Those candidates who receive low marks in the written and oral examinations may be eliminated from further competition.

IV. Eligibility. The examining board reserves, and will exercise, the right to reject the applications of

1. Such candidates as may seem, after investigation of their records, not to possess the requisite qualifications, either professional or personal.

2. Those whose physical condition is deemed not satisfactory.

3. Those who are not approved by the governing boards of at least two of the hospitals.

The governing boards of the several hospitals reserve the right to pass on the eligibility of each applicant.

If a candidate is declared ineligible by any one hospital he is notified that he may enter the examination, but may not include that institution in the list of choices.

A candidate declared ineligible by three of the hospitals will not be permitted to take the examination.

Applicants who are married, if eligible in all other respects, will be admitted to the examination on the understanding that, if successful, their choice is limited to the services of the New York and Hudson Street hospitals and Roosevelt Hospital.

Candidates will be notified whether or not they are accepted as eligible to enter the examination not less than ten days before the date of the examination.

V. Applicants must present themselves for a personal interview with the examining board if requested to do so.

It is of interest that nearly all the correspondents[9] who replied to that part of the letter asking for suggestions as to improvements in the appointment of interns expressed themselves as satisfied with the methods of their respective hospitals. The joint board examination in New York is said to be "very advantageous to students and the best hospitals," but a big task for a voluntary board. Several correspondents, while stating their satisfaction with the method they practice, or merely saying that it works well, admit that they have no suggestions to make, as they are not familiar with the methods of other hospitals.

7. Since the affiliation of the Presbyterian Hospital with the College of Physicians and Surgeons its internships have been limited to the graduates of the latter school.

8. For examination held in 1911.

9. Superintendents of hospitals, the chairman or other member of executive or examining committees and the deans of schools.

Information of another character, which is quite typical of views held by many in regard to hospital examinations, was offered by one correspondent:

> I remember very many years ago, in ..... I was an applicant for internship at ..... It had been announced formally that interns would be elected in accordance with their examination grades, the examinations being conducted by members of the staff, and covering two days, the first day written, the second oral. (The examination, I suppose, was fairly conducted, though there was a persistent rumor that two of the ..... men, who were office students of a member of the staff, had the examination questions in their possession a day or two before the examinations were held.) When the grades were announced I had the satisfaction of finding that I stood first from ....., but third on the list, as the two suspected applicants stood respectively first and second. My examination having been thus satisfactory, I started out to interview the trustees, but finally one of them was candid enough to tell me that I might just as well save shoe-leather, as the appointments had all been "fixed" and that they would pay no attention to the examination grades. This I found was a fact, and that the very tail-ender of some sixty or seventy applicants, a ..... man, was one of the elect. He happened to have an uncle who was editor of one of the leading daily papers.

This was many years ago, and such methods have doubtless disappeared, but the general impression is to the contrary. If appointment is purely elective, "pull" of all kinds is legitimate and to be expected; but when appointment is preceded by competitive examination, but obtained through influence, the examination becomes a farce and the hospital suffers, as good men naturally do not apply for appointment to such hospitals.

Adverse criticism of prevailing methods has been offered in only two or three instances. The dean of a school closely connected with a large hospital, and for years familiar with the problems of intern appointment, states emphatically that he considers the theoretical examination, even when combined with practical tests, an unsafe guide in that it is almost always used as the first step in the "weeding-out" process, and thus "quiz-crammed" men have the advantage, and the men with a maximum knowledge of practical clinical and laboratory work do not reach the stage of the examination where they may show their worth. He therefore prefers the practical examination alone.

A secretary of an examining committee of a non-teaching hospital, though himself a teaching clinician in another hospital, expresses entire disapproval of the competitive system by oral or written examination which disregards personality, previous academic and professional training and practical knowledge.

A hospital superintendent suggests that all applicants for internship should visit the hospital for a few days in order that during this time "the authorities might become more intimately acquainted with them." Another suggests that the colleges send to the hospitals a number of their best men, as determined by the four years' college work, and let the hospital select, without examination, the number of men they need.

Most of the comments are written from the point of view of the hospital, as "we feel that if we can get the right kind of man we can develop him into a good intern." On the other hand, one of the wisest and most progressive of our hospital superintendents appears to have given the subject enough thought to grasp the real importance of the problem, the influence on medical education. In a lengthy discussion, he begins, "An experience of some years has taught us that the matter of selecting interns is about the worst that could be conceived," and ends, "I have tried to be explicit about the matter because it is an important problem of hospital administration and, to my mind, one of still greater importance to the medical schools of the country."

And this is the crux of the whole question: Naturally the hospitals want good interns, and the medical schools want their men placed in good hospitals—both purely selfish desires. But both ignore the possibilities of the method of intern appointment as an incentive to the improvement of educational methods in medicine and a means of turning the student's attention to the practical side of his education.

Various influences outside the medical faculty and independent of it have brought about most important changes in medical education. So the hospitals, by establishing practical knowledge as a basis for admission to internship, could influence powerfully the trend of medical education toward a further development of practical clinical and laboratory instruction, and in the end the hospital will gain also, for it would thus secure for its service men who are better trained and more efficient.

If the hospital year becomes generally established, school and hospital will meet on common ground and with mutual interests. It is for the purpose of aiding in the solution of the difficulties which may then arise that this brief study of the intern question is presented in the hope that early discussion may lead to provisional plans for adjustment to new conditions.

NEPHROPTOSIS AND NEPHROPEXY

WITH SPECIAL REFERENCE TO THE BASKET-HANDLE OPERATION

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In Mesue's[1] work, published in Venice, 1568, appears probably the first description of a movable kidney, and a century later Riolan[2] described nephroptosis as a symptom-producing lesion. Since then an enormous amount of literature has accumulated on the subject, a great deal of which has probably somewhat overestimated the importance of the condition. The object of this paper is to touch briefly on the various factors concerned in kidney-ptosis, and to report the results of the basket-handle operation.

ETIOLOGY

Among the first causes should be considered the fact that the kidneys are normally slightly mobile, whence, of course, their liability to greater and abnormal mobility.

The various features to be considered are:

Age: Cases occur mostly between the ages of 20 and 50. In children under 10, Schutze reports eight cases up to 1888.

Sex: The incidence is mostly in females (Glénard[3]).

Heredity: Guterlach and Ewald strongly emphasize a congenital disposition to this condition.

Rapid Emaciation: Causing disappearance of the perirenal fat.

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1. Mesue: Medici Clarissimi Opera, a Joanne Costa Medico Lavdensi nunc recognita, Venice, 1568, p. 112 of chapter "De Aegritudinib., Renum et Vasicae; De dislocatione Renum et Vesicae."
2. Riolan: Manuel anatomique et pathologique, Lyons, 1682, p. 228.
3. Glénard, Frantz: Les ptoses viscérales, Paris, 1899, p. 307.

Abnormal Laxity of Abdominal Muscles: As in Glénard's disease, a condition often accompanied by prolapsed kidneys.

Tight Lacing.

Pregnancy: This is an important factor, kidney-ptosis occurring much more often in multiparae than in other women (60 in 100 Glénard); other conditions in which there is sudden decrease of intra-abdominal tension might cause kidney prolapse.

Right Kidney: This is by far the one mostly affected; then both, and lastly the left.

Trauma: This might occasionally dislodge the kidney.

Tumor of Kidney: This by increasing the weight of the organ might cause its descent.

Conformation of Body: This was studied and reported on in a splendid paper by Harris,[4] who strongly emphasizes its importance.

PATHOLOGIC ANATOMY

Rayer[5] gave the first detailed account of the pathology of a movable kidney.

There are two forms of abnormal mobility, the congenital and the acquired. The former is said to be always intraperitoneal and is held to the back by a mesentery (mesonephron). From its attachment, it may be swung into almost any part of the abdominal cavity, depending on the length of its mesonephron. It may be fixed by adhesions.

Glénard describes three degrees of prolapse: In the first degree, the superior pole is situated just opposite the costal margin; in the next, somewhat below; and in the third, the kidney is found at some distance within the abdominal cavity. Often the gland is rotated on its transverse axis, as a rule, in a position of anteversion. It may be altered in shape.

I have seen the poles approximated as in a horseshoe-kidney. In some I found the kidney very much lobulated. The reason for this must be that in these cases the capsule was continuous with or connected with strong septa running into the organ. When such an organ becomes congested, the associated swelling of the gland would be limited to the parts of the capsule between the septal attachments, thus producing the rounded elevations.

The prolapsed gland may be normal in size, larger, or even smaller than normal. The hydronephrotic organ may be of enormous size.

The kidney may be normal in color—dull red or purplish in its entirety, in spots or in one pole.

The capsule may be normal, very thin or greatly thickened. The thickness of the capsule in my cases bore, in the main, some relation to the degree of mobility. The greater the mobility the thicker the capsule. In one greatly prolapsed kidney, however, I found a very thin one. The capsule strips very readily, except in cases with septal prolongations.

The perirenal fat may be diminished or almost entirely gone. The kidney may be suspended by a long vascular pedicle entirely surrounded by peritoneum.

The renal vessels may be greatly elongated and their caliber diminished. The vena cava and even the aorta have been found strongly curved from dragging on the renal vessel.

The pelves and ureters are changed in position and caliber. The ureteric lumen may become temporarily occluded, giving rise to hydronephrosis.

Secondary lesions are produced by pressure from the luxated organ, or from its becoming adherent to surrounding structures. Thus pressure on the cecum may cause severe constipation. Peritoneal bands attached to the kidney may compress the duodenum and the bile-ducts, causing gastric dilatation and slight jaundice.

The organ may become adherent to the edge of the liver, the gall-bladder or ascending colon, and of course to any organ with which it may come in contact.

Outside of hydronephrosis, the principal complication of kidney-ptosis, the organ may, of course, contract any lesion to which it is otherwise liable.

Complicating conditions are general enteroptosis, retroversion and prolapse of the uterus, affections of the gall-bladder and appendicitis, the latter being quite frequent.

Edebohls[6] first called attention to the association of kidney-ptosis and appendicitis, and performed the first lumbar appendectomy in 1905.

SYMPTOMS, DIAGNOSIS AND TREATMENT

Nephroptosis is devoid of symptoms in by far the majority of the cases, at least as long as the patient is in happy ignorance of the condition. For this reason some of these patients should not be informed of the findings, but the relatives should, as otherwise the physician might be blamed later for not making the diagnosis.

The main symptomatic features are pains, gastro-intestinal disturbances and neurasthenia. The pains vary from a dragging, dull pain in the lumbar region radiating down along the right side of the abdomen to the severe paroxysmal pain of a Dietl's crisis. The gastro-intestinal symptoms are mainly those of an ordinary dyspepsia. The degree of the associating neurosis varies greatly, and often is the most disagreeable feature of the condition.

The condition may have to be differentiated from Riedel's lobe, overdistended gall-bladder, carcinoma of pylorus, fecal impaction, etc.

The treatment may be (1) palliative, by corsets, rest, suggestion, etc., or (2) operative.

METHODS OF FIXATION

It is interesting to note that seemingly an American surgeon, Dr. Greensville Dowell, was the first to attempt a nephropexy, in 1874, although at the time he believed he was dealing with a movable tumor. The case is reported by Smyth[7] and furnishes very interesting reading. The patient, an Irish woman, 27 years of age, had for some time suffered from recurrent abdominal pains, when she discovered a very mobile tumor in the right side of the abdomen. Dr. Dowell was consulted about the trouble and concluded that the pains were due to the great mobility of the tumefaction, and reasoned that if in any way it could be immobilized the pains would cease. The patient readily consented to operation and Dr. Dowell later performed the fixation as follows:

A large curved needle threaded with a tape-seton was plunged through the abdominal wall, into the tumor and out again and then tied. The procedure was followed by hematuria lasting for a few days. The operation gave relief from previous symptoms. Three months later the tape broke and there was considerable discharge of matter. Dr. Dowell being away, two other men endeavored to repeat Dowell's operation. They tried twice. Both times the needle broke. In the excitement the needle points were left in the abdominal wall. Dr.

4. Harris, M. L.: The Influence of Trauma in the Production of Movable Kidney, The Journal A. M. A., Feb. 13, 1904, p. 411.
5. Rayer: Maladies de rein, Paris, 1841, iii, 783.
6. Edebohls: Ann. Surg., xxxv, 17.
7. Smyth, Dowell: New Orleans Med. and Surg. Jour., 1879, vii, 218.

Dowell later repeated his first operation, but with only temporary benefit to the patient. About seven years later the tumor was diagnosed by another man as a floating kidney, and removed.

The first premeditated attempt was made by Hahn[8] of Berlin. The first successful operation in the United States was done by Weir,[9] in England by Newman,[10] and in France by Bazy.[11]

A great number of procedures have been reported and may be classified as follows:

Suture of Kidney Proper.—Gardner[12] of Melbourne uses two kangaroo-tendon sutures piercing the kidney, and ties over fascia.

Albarran,[13] following decapsulation of the kidney and removal of the perineal fat, passes three silk ligatures through the kidney substance; the upper one is tied to the periosteum of the twelfth rib; the others pass through muscles and fascia.

Morris operates similarly, omitting kidney denudation.

Bruce Clark[14] denudes the kidney slightly and passes silk ligatures through its substance.

Suture of Fatty Capsule.—Hahn[8] sewed the fatty capsule to back muscles and packed the wound with gauze. This procedure was used by Kuester, Esmarch and Nicholas Senn.

Shoemaker[15] fixed the kidney by buttonholing the fatty capsule and suturing it in different ways to surrounding structure.

Gardner sutured the fatty capsule in addition to kidney piercing sutures.

Suture of the True Capsule.—Wolf, Loebstein and Edebohls[16] completely denuded the kidney so as to get firm adhesions, and then sutured the capsule to fascia and muscles.

Bishop[17] denudes the lower pole of the kidney, suturing the free capsule and leaving the upper pole free.

Tuffier,[18] Jacobson and Boecher suture the stripped-off capsule.

Newman[19] also suspends the kidneys from the deflected capsule. Murphy[20] rolls the deflected capsule in folds on either side, suturing these folds to the surrounding tissues. Gounesco[21] partly strips the capsule, suturing it to the periosteum of the eleventh and twelfth ribs with silver wire.

Suture to Lower Rib.—Guyon,[22] Cecherelli,[23] Albarran,[24] Bassini[25] and others sutured the kidney to the lower rib usually in combination with other methods, using mostly silk ligatures.

Suture to Fascia.—Kocker[26] strips the fibrous capsule and sews it with the fatty capsule to the lumbodorsal fascia with silk ligatures, and then packs the wound and allows it to granulate.

Vulliet[27] uses strands of fascia from the erector spinae and subruns the kidney capsule.

Special Methods.—The following men have devised special methods, the details of which would require too much space: Pauli and Duret,[28] Goelet,[29] Harris,[30] Harlan,[31] Lane,[32] Morris,[33] Ferguson[34] and others.

"BASKET-HANDLE OPERATION"

Technic.—After the kidney has been exposed and delivered through the wound, the capsule is split and deflected (Fig. 1). Then the procedure is as follows:

Step 1: Cut with scissors, as indicated by dotted line in Figure 1, making two flaps.

Step 2: Push kidney down into the wound. Draw the artificial suspensory ligaments through the muscles and fascia on either side of the wound. The remaining border of the deflected capsule may be sewed to the transverse fascia.

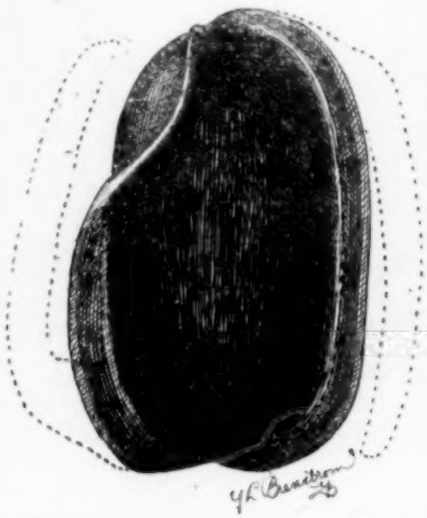

Fig. 1.—Artificial kidney ligaments cut from the split and deflected capsule.

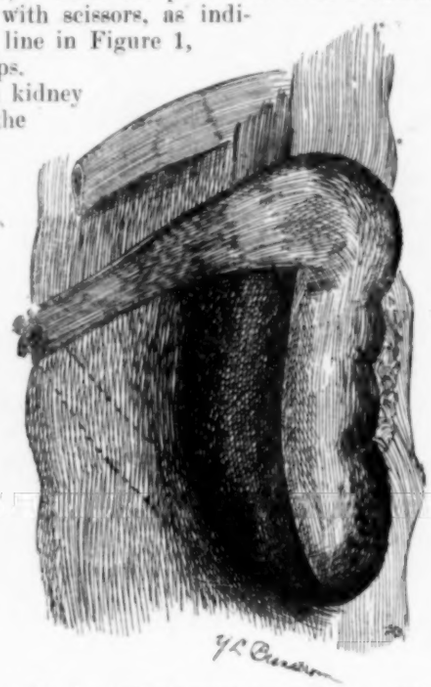

Fig. 2.—Author's operation completed. Capsular ligaments drawn through muscles and fascia forming the "basket handle."

Step 3: Unite muscular layer over the kidney. The kidney is then drawn up against the denuded muscles by the artificial capsular ligaments, the ends of which are tied in a knot and transfixed by a silk or catgut suture. The united flaps thus form a "basket-handle," from which the kidney (basket) is suspended as in Figure 2.

For some time I have placed the patients in the slanting position (Fig. 3) for all my kidney work.

8. Hahn: Centralbl. f. Chir., 1881, p. 449.
9. Weir: New York Med. Jour., 1883, xxxvii, 169.
10. Newman: Glasgow Med. Jour., August, 1883.
11. Bazy: Bull. et mém. Soc. de chir. de Paris, 1899, xxv, 831.
12. Gardner: Austral. Med. Jour., 1885, p. 145.
13. Albarran: Presse méd., 1906, p. 253.
14. Clark, Bruce: Brit. Med. Jour., 1895, i, 575.
15. Shoemaker, George Erety: A Modification of the Technic of Fixation of the Movable Kidney, THE JOURNAL A. M. A., Dec. 8, 1906, p. 1917.
16. Edebohls: Ann. Surg., 1902, xxxv, 137.
17. Bishop: Lancet, London, Aug. 3, 1907.
18. Tuffier: Rein mobile et néphropexie, Cong. franç. de chir., 1889, Paris, 1890, iv, 563.
19. Newman: Glasgow Med. Jour., 1884, xxi, 465.
20. Murphy: Quoted by Harlan, Am. Jour. Surg., 1909, xxiii, 324.
21. Gounesco: Centralbl. f. Chir., Nov. 30, 1897.
22. Guyon: Bull. de l'Acad. de méd., Paris, 1889, xxi.
23. Cecherelli: La nefrorraffia del rene mobili, Riv. clin. de Bologna, 1884, iv, 289.
24. Albarran: Médecine opératoire des voies urinaries, Paris, 1909.
25. Bassini: Ann. di med. e di chir., Milan, September, 1882.
26. Kocker: Chirurgische Operationslehre, Jena, 1907.
27. Vulliet: Rev. méd. de la Suisse, June 20, 1895, p. 326.
28. Duret: Du traitement des reins mobiles, Bull. de l'Acad. roy. de la Belgique, 1888.
29. Goelet: Ann. Surg., 1903, xxxviii, 769.
30. Harris, M. L.: Movable Kidney—Its Cause and Treatment, THE JOURNAL A. M. A., June 1, 1901, p. 1527; also article referred to in Footnote 4.
31. Harlan: Am. Jour. Surg., 1909, xxiii, 324.
32. Lane: Clin. Jour., London, June 5, 1901.
33. Morris: Am. Jour. Surg., January, 1907.
34. Ferguson, Alexander Hugh: New Technic for Nephropexy, THE JOURNAL A. M. A., Aug. 15, 1908, p. 554.

PATIENTS OPERATED ON BY THE "BASKET-HANDLE OPERATION"

Since the first patient[35] operated on, March 20, 1906, I have performed twenty-seven nephropexies by this method with no death and with good anatomic results. The patients were operated on at St. Bernard's, Englewood, Washington Park and Vesta Circle hospitals.

Case 1: Miss S., operated on March 10, 1906. March 24, 1912, condition good.

Case 2: Mrs. E., operated on May 1, 1906. A year later in good condition.

Cases 3, 4 and 5: Patients were operated on at Englewood Hospital. My private records were unfortunately lost. For the last two years I have been vainly trying to obtain the records from the hospital authorities.

Case 6: Mrs. L., operated on April 3, 1909. Oct. 22, 1912, condition good.

Case 7: Miss J., operated on Feb. 24, 1910. March 23, 1912, condition good.

Case 8: Miss P., operated on Sept. 19, 1910. One year later, condition good.

Case 9: Miss L., operated on Oct. 27, 1910. Several months later, condition good.

Case 10: Miss C., operated on Oct. 29, 1910. One year later, good.

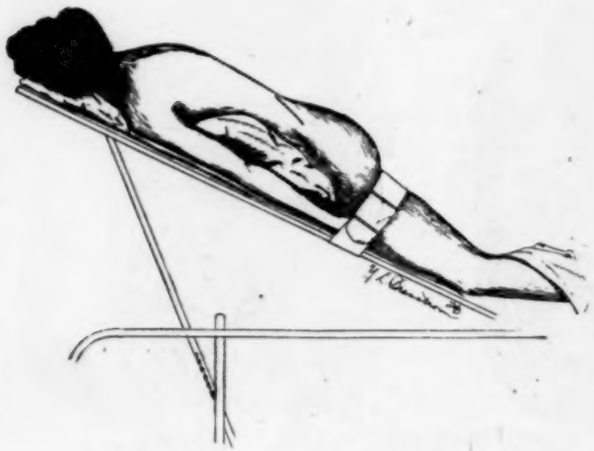

Fig. 3.—Author's position for kidney work.

Case 11: Mrs. N., operated on Nov. 10, 1910. July 30, 1912, good.

Case 12: Mrs. T., operated on Jan. 29, 1911. Nov. 15, 1912, good.

Case 13: Mrs. A., operated on Jan. 29, 1911. Sept. 11, 1912, good.

Case 14: Mrs. A., operated on April 30, 1911. Sept. 14, 1912, good.

Case 15: Mrs. H., operated on Sept. 28, 1911. Oct. 10, 1912, good.

Case 16: Miss H., operated on Sept. 28, 1911. About two months later patient wrote to me that she was in good condition.

Case 17: Miss D., operated on Nov. 21, 1911. Immediate result good.

Case 18: Mrs. A., operated on Nov. 21, 1911. Oct. 2, 1912, good.

Case 19: Mrs. E., operated on Jan. 9, 1912. Dr. Rydin tells me that kidney is in good place. This patient had a frightful postoperative neurosis.

Case 20: Mrs. M., operated on Jan. 24, 1912. Oct. 22, 1912, good.

Case 21: Miss P., operated on Jan. 24, 1912. Oct. 22, 1912, good.

Case 22: Mrs. J., operated on Feb. 2, 1912. Dr. Dahlberg reports condition good.

Case 23: Miss A., operated on March 13, 1912. Immediate results good.

Case 24: Mrs. C., operated on April 13, 1912. Oct. 18, 1912, good.

Case 25: Mrs. R., operated on April 24, 1912. Immediate results good.

Case 26: Mrs. C., operated on May 11, 1912. Oct. 3, 1912, good.

Case 27: Miss A., operated on Sept. 29, 1912. Left hospital in good condition.

The reported condition of these patients refers only to the anatomic results which, as far as I know, are good in all. Some of the kidneys were anchored somewhat low, but they are not movable.

The patients were all females, and except for one on the left side (Case 18) the cases were all prolapses of the right kidney. Nineteen patients (including those at Englewood) had undergone pregnancy. In six patients the appendix was taken through the lumbar incision. In one case I had a complicating thrombophlebitis of the left leg, and in two the most aggravated postoperative neurosis.

1230 East Sixty-Third Street.

35. Werelius: Surg., Gynec. and Obst., 1906, ii, 700.

AN UNUSUAL FORM OF MINERAL POISONING AFFECTING THE NERVOUS SYSTEM: MANGANESE?*

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A certain indication of the humanitarian trend of modern times is the ever-increasing interest in the accidents, intoxications and diseases coincident with various trades. The ill effects that arsenic, lead and phosphorus have on workers started this line of investigation, and these intoxications have been so well studied that their clinical pictures are well known. Undoubtedly the most serious and permanent of trade diseases are those which affect the nervous system.

Up to within recent years, only peripheral nervous system poisonings were recognized in workers in metallic and other poisons. Peripheral neuritis is the commonest form of occupational nervous system disorder, and it has for its commonest causative agents lead and arsenic. Other substances which produce neuritis in workers are copper, mercury, carbon bisulphid, anilin oil and the cyanids. In the central nervous system, on the other hand, conditions are different. Of all the substances mentioned, lead alone is known to produce symptoms of central nervous system involvement. The lead encephalopathies with the epileptiform attacks, hallucinations and mental signs are due not so much to the involvement of brain tissue as to the affection of the blood-vessels of the brain, to which the brain changes are secondary. The involvement is so plainly vascular that no part of the brain seems to be especially susceptible or more often involved than the rest.

In the cases which I report here, one is brought face to face with the possibility of the selective central nervous system poisoning arising in metal-workers. The clinical picture, while confusing, is not altogether unknown in workers in certain metallic substances. In

* Read before the Section on Hygiene of Occupations, Fifteenth International Congress on Hygiene and Demography, Washington, D. C., Sept. 24, 1912.

* From the Third Division, New York Neurological Institute.

its causation, one has to look toward mineral substances formerly considered safe and harmless. Zinc has been extensively used by man since earliest times; practically all authors have considered it innocuous to the human system, if one may exclude the irritating effects on the gastro-intestinal tract which all the heavy materials possess in common. The toxicology of manganese is not nearly so well known, as its use is much less extensive.

The cases presented here came under my observation among some workers in the separating-mill connected with a large mine from which zinc is the principal product. In order to make the genesis of this condition clear, a description of the materials, methods and working conditions is necessary.

Eighty-five different ores are found in this mine. One ore, a sesquioxid of zinc, iron and manganese, makes up 45 per cent. of the bulk of the ore body. Willimite, a silicious oxid of zinc, forms 21 per cent.; rodenite, a silicate of manganese 9 per cent., and the red oxid of zinc, 4 per cent. The other eighty-one ores make up the remaining 21 per cent. in varying quantities. Lead and arsenic may be absolutely excluded as causative agents. No trace of arsenic is ever found in the ore. Minute, indeterminable traces of lead are occasionally found in the routine analyses. That lead may be absolutely excluded becomes apparent when we consider that the first grade of commercial zinc must assay less than 0.0025 per cent. of lead. The zinc recovered from this mine is always first grade, and no measures are ever necessary to remove the lead.

A salient point in the separation of the crude ores is the use of electromagnets for the removal of the magnetic ores, that is, those containing manganese and iron. The magnets used here are said to be the strongest electromagnets in the country, and vary in strength from 20,000 to 100,000 ampere-turns. This is done with the ore thoroughly dried. Further separation is done by a specific gravity method under water.

As most of the handling of the ground ore is done in the dry state, the dust problem has been one of much concern. The mine authorities have taken many ingenious means to reduce the amount of dust in the ore and have eliminated a great deal of it. Nevertheless, throughout the mill, except on the floor where the water separation is done, the air which the workmen breathe is laden with a very fine gray dust. In this mineral fog the men work in long shifts, and at the end of their day they are thickly coated with dust. A well-appointed wash-house adjoins the mill in which the men may take a full shower bath, and change their clothes before leaving for their homes.

The material for this paper consists of nine cases occurring in men working in this mill; nearly all the patients acquired the condition while working in the part of the building where the electric separators are situated, or shortly after being transferred thence. The history is practically the same in all cases.

After the man has worked in the dust for a length of time varying from six months to three years, he begins to notice that he has difficulty in walking, the main feature of which is that he is unable to walk down hill slowly. On a level ground and up hill he has no trouble, but when he once starts to walk down an incline, he goes faster and faster until at length he must run to keep himself from falling forward. He is unable to stop and must keep on with ever-increasing speed until he runs against some object which stops him, or until he falls down. Retropulsion develops together with this propulsion and the patient finds himself unsteady on his feet whenever he wants to move. Walking backward is impossible, for as soon as the man tries it, he falls backward or sits down. This is the gait disturbance we see in paralysis agitans, and this is not the only way in which our cases resemble that disease. With the onset, pain and stiffness in the legs were noticed in four cases, insomnia in one, and difficulty in writing in one. The latter patient complained that he could not control his hand well in writing, and that the figures he made were smaller than those he used to make, which also occurs in paralysis agitans.

While the symptoms of this condition are few, they are nevertheless very definite. The patient complains of little excepting propulsion, retropulsion and unsteady station. About half the patients have defective hearing not due to middle-ear disease. The speech is slightly slurring in some cases. The face in all the men has somewhat of the flat, mask-like character of paralysis agitans. There is more or less tendency to impulsive laughter. Tremor of the tongue is common, as is also a fine static tremor of the hands. The legs feel weak and shaky, and the station is insecure. Propulsion and retropulsion in the gait are the most characteristic features. Asynergia is always present in the well-developed cases. The eyes are normal in every respect. Muscular power is well preserved. The deep and superficial muscle reflexes are always normal. There is never any rest tremor of the limbs. Sensations are perfectly preserved. The laboratory offers little aid in the diagnosis. The blood never shows the changes so characteristically seen in lead-poisoning. The urine is negative in those cases which have been investigated. The presence of zinc and manganese in the urine of workers will be spoken of later. The Wassermann reaction was negative in the five cases in which it was employed. The spinal fluid was examined in three with negative findings. On the mental side, nothing characteristic was found. One patient showed a definite intelligence deterioration, similar to general paresis, which has since considerably improved. Two others complained of difficulty in memory and attention which was not demonstrable objectively. Most of these patients come from a class with little or no education which, combined with a language difficulty, has made routine mental examination difficult. It is safe to say, nevertheless, that there is no definite mental side to this clinical picture.

As time will not permit a discussion of all the cases we have investigated, I will make a full report of one which was studied in the New York Neurological Institute.

R. B., aged 49, born in England, married, was admitted to the third division of the New York Neurological Institute, March 11, 1912. His family history was negative in every respect. His early history was uneventful. He denied syphilitic infection. He had pneumonia in 1893. He had been married twenty-eight years and has had three children, all living and well.

He went to work in this mill as a shift boss on the electric separators in 1902, and in the latter part of 1904 he began to have trouble in sleeping and would tire easily. In December of that year he began to lose control of his hand in writing. The letters he made looked small and cramped. He was unable to make the figure 3. It would take him a long time to write out his reports, and they were not clearly legible. At about the same time he became unsteady on his feet, and had difficulty in walking down hill. When he started to walk down hill he would get going faster, and finally had to run until he could catch hold of a tree or similar object. Every time he tried to walk backward he fell. He had no sphincter trouble. In March, 1905, he left the mill on account

of the trouble with his legs and the fact that he was coughing up large quantities of black matter. He continued to cough up much of this black sputum for a year and a half after leaving the mill. For the first year that he was away from the mill, his symptoms gradually progressed until he was almost unable to walk. His speech became affected, and his family had difficulty in understanding what he said. This condition continued until the spring of 1909, when the patient began to improve a little. He became more steady on his feet and his speech was more distinct. He has progressed very slowly since that time. At present he gets around fairly well with the aid of a cane. He cannot walk backward or go down hill without falling. His speech is not entirely clear, his writing is still small and cramped. His memory is perfect; sexual power was preserved.

Physical examination showed a fairly well-developed man of 49 years, weighing 141 pounds. His face was somewhat mask-like and expressionless, and he was unable to whistle. The eyes were entirely negative except for a corneal scar in the right eye, resulting from an old injury, with the iris healed in it. Dr. E. B. Dench made the following report on his ears:

"The reactions of the labyrinth on each side and of each auditory nerve are normal. There was only an insignificant middle-ear condition. I should, therefore, place the auditory impairment in the reception center."

There was a fine intention tremor of the hands. All deep and superficial reflexes were active and equal. There was no Babinski or clonus. The patient showed a tendency to propulsion in his gait which became marked when he went down an incline. He was unable to walk backward without falling. Asynergia was marked in all tests; no ataxia. The electrical reactions of the muscles of the arms and legs were normal in every respect. Sensation was perfectly preserved throughout. The lungs and heart were negative, blood-vessels soft, blood-pressure 126 to 140 m.m. Analysis of the stomach contents showed slight subacidity. The urine showed nothing abnormal except a considerable excess of indican. The blood was normal: no anemia, hyperleukocytosis or changes in the differential count. Wassermann reaction of the blood-serum was negative. The spinal fluid showed the following: Wassermann negative; globulin content normal; cells 3 lymphocytes per cubic millimeter. Fehling's reduction positive—a negative fluid.

The course of the condition is chronic. None of the patients has recovered. Most of them improve when removed from the dust and especially from the magnet floor. Three patients have made little or no improvement. The duration is a matter of years, and while the condition is never fatal, the prognosis for recovery is extremely poor.

Only one of the cases on which this paper is based has come to autopsy. The patient showed the symptoms in rather marked form and died of pneumonia. I am sorry not to be able to report the findings in full, but the material is not as yet ready for sectioning. Grossly, the brain and cord showed nothing abnormal. There was no arteriosclerosis of the larger vessels or any areas of softening. From rather superficial inspection of the brain-stem blocks before imbedding, it would appear that the perivascular spaces of the lenticular nuclei and the outer part of the optic thalami are considerably larger than normal. These are not unlike the "lacunae" described by Marie in certain cases of cerebral arteriosclerosis. These are only mentioned in passing, as I do not at present care to lay too much stress on them as of pathologic importance. No gross tract degenerations were seen anywhere. There were no gross changes in the kidneys, liver or spleen.

I feel that this series of peculiarly similar cases represents a definite disease picture, the cause for which must be found in the working conditions or the material which the men handle. It has been a problem to determine the real causative factor. Zinc, of course, was the one first thought of, but zinc has been regarded for years as a harmless metal, in so far as its effects on the nervous system are concerned. Popoff[1] described a case of general muscular atrophy with gastro-intestinal symptoms in a bronze worker which he ascribed to zinc, but it does not correspond with our cases. Edsall,[2] with an extended experience among zinc workers, believes that zinc never causes a systemic poisoning. Schlockow,[3] in 1879, reported a peculiar disease which he had observed among some workers in a zinc mine in upper Silesia; the symptoms these patients exhibited were similar in many respects to those I am considering here. There was marked intention tremor, but the most prominent symptom was gait disturbance which he described as "stiff, hurried and unsteady." Asynergia was certainly present. The reflexes were normal. The author considered it a spinal-cord disease due to zinc poisoning, although he had no autopsy material to substantiate his theory.

It is interesting to note that the ore taken from this mine in Silesia was not unlike that which our patients handled, in that it contained a considerable quantity of manganese, but there was also lead and arsenic in this Silesian ore, which possibly accounted for some of the symptoms Schlockow reported.

Since zinc cannot be blamed for this intoxication, one must next turn to the other principal metallic substance, manganese. The toxicology of this metal is little known owing to its restricted use. Of all disease pictures reported in literature, none more closely resembles the cases here presented than does that reported by Embden[4] in workers in a manganese dioxid grinding-mill. He reported four cases which occurred in men who worked in an atmosphere of manganese dioxid dust. They showed general muscular weakness, but no atrophy; mask-like face, with inability to whistle. The gait was unsteady, and there was a tendency to fall forward especially on going down an incline. Retropulsion was marked. All tendon reflexes were active and equal. There was a coarse intention tremor which, in some cases, made writing difficult. Voice was slow, unsteady and monotonous. One patient had impulsive laughter. There was no sphincter trouble. Manganese was found in the urine. These symptoms came on after the patients had worked a few months in the manganese dust.

It has been suggested that possibly the high-power electromagnets among which most of these men have worked might play some part in the etiology of the condition. It is difficult to conceive of this as a primary cause, as there are other places where men work in high-power electric fields in which such a condition must have been observed long ago. When one considers, however, that all but one of our patients developed the symptoms while working on the floor with the magnets, it must be admitted that possibly this factor plays an etiologic rôle.

A final word on the absorption and excretion of the poison. Absorption must take place through either the lungs or the alimentary tract. The density of the air dust makes it impossible to avoid inhaling the dust into the lungs. In all the cases there was a history of spitting

1. Popoff: Ein Fall von chronischer Vergiftung mit Zinkoxyddampfer und Experimente über die Wirkung einiger Antifermentative Mittel, Berl. klin. Wchnschr., 1873, p. 49.
2. Edsall: Article in Osler's Modern Medicine, p. 138.
3. Schlockow: Ueber ein eigenartiges Rückenmarksleiden der Zinkhuttenarbeiter, Deutsch. med. Wchnschr., 1879, p. 208.
4. Embden: Zur Kenntnis der metallischen Vergiften; über die chronischen Manganvergiftung der Braunsteinmüller, Deutsch. med. Wchnschr., 1901, p. 795.

up of dark sputum long after the man had stopped working in the mill. Nevertheless, it is doubtful whether absorption of heavy metal ever takes place through the lungs, as inspired dust is probably all coughed up or stored in the lymph-nodes and tissues. The gastro-intestinal tract is probably the portal of entry. In the first place, manganese is soluble in hydrochloric acid and thus probably much of the manganese content of the swallowed dust leaves the stomach in absorbable form. The absence of gastro-intestinal symptoms is probably due to the small amount of the poison in the intestine at any one time.

Of the excretion, little is known. The excretion of most mineral poisons takes place principally through the intestines, with the kidneys as secondary. On one occasion, specimens of urine were taken from four men working on the magnetic machine, none of whom showed any symptoms, and, in each of the specimens, definite traces of zinc and manganese were found. Four urines from other workers in the mill were analyzed and showed no trace of the metal. It was suggested that possibly in the magnetic field the manganese molecule was so altered that its solubility in blood-serum was increased. To determine this, experiments have been made by shaking up the manganese-bearing ore in rabbit's blood-serum both in the magnetic field and out of it. No difference in the solubility could be determined. To speculate on the question why so few of the men employed in the work developed this condition takes one into the field of individual susceptibility, and thus far from the purpose of this paper.

CONCLUSIONS

1. This is a definite pathologic condition, recognizable by a definite symptom-complex.
2. It is a pathologic condition of the central nervous system affecting principally the mechanism of walking and equilibrium.
3. It cannot be placed under the heading of any known central nervous system disease.
4. It is of toxic origin, and in greatest probability the toxic agent is manganese.

This paper is offered as a preliminary report of a more extended work now being done, together with Dr. F. P. Wilbur, to whom my heartiest thanks are due.

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A NEW APPARATUS FOR USE IN BLOOD-CULTURES*

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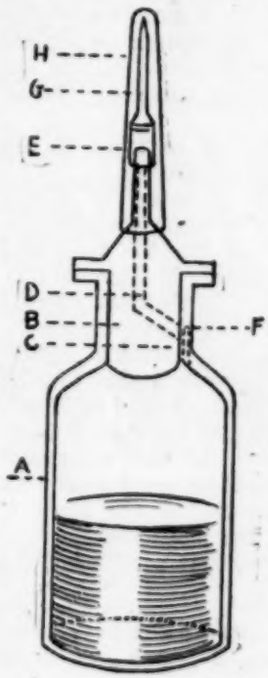
Of all the clinical methods as yet devised for the purpose of diagnosis, prognosis and treatment of disease, there is no single method which finds so wide a range of usefulness and importance and gives results which are so definite as that of blood-cultures. Yet the general practitioner seldom avails himself of the method of culturing bacteria in the blood, its use being restricted mainly to hospital practice. This is due to the difficulty of procuring the blood. By the methods at present in use the process of obtaining blood is exceedingly cumbersome, and contaminations are frequent, so that one has to have special training in this line of work, for otherwise the results are not only unreliable but also even misleading.

By the use of the method devised, the practitioner can avail himself of blood-cultures as readily as of the Widal reaction in typhoid.

DESCRIPTION OF APPARATUS

The apparatus is composed of a glass bottle (*A*), containing a ground air-tight stopper (*B*); along the lower half of the inner surface of the neck of the flask there is a longitudinal groove (*C*). The stopper contains a longitudinal canal (*D*), which opens above at *E*, and below the canal is continuous obliquely downward and outward, opening at the ground side of the stopper, at *F*, which lies below the upper level of the groove (*C*). It is evident that if the stopper is placed in the bottle so that the lower opening of the canal (*F*) opens into the groove (*C*) on the inner surface of the neck, the inside of the flask will be in direct communication with the outside by means of the groove (*C*) and the canal (*D*).



Apparatus for obtaining blood-cultures. *A*, glass bottle; *B*, air-tight stopper; *C*, groove in neck of flask; *D*, canal in stopper; *E*, upper opening of canal; *F*, lower opening; *G*, needle; *H*, test-tube. In this view of the apparatus the canal *(D)* is in communication with the groove *(C)*. By turning the stopper this communication is broken.

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Next produce a vacuum in the flask. This can be accomplished in several ways, either by a water-pump, vacuum-pump or by the simple aspiration of the air with an ordinary syringe or mouth (as suggested by Mr. Layton). I found that the simplest way of producing a vacuum and at the same time sterilizing the contents of the flask is by placing the flask in water (or brine) with its neck above the level of the fluid, and then boil the water or suck the air out with the mouth. The heat will rarify the air in the flask and thus a partial vacuum, sufficient for all practical purposes, will be produced. The same result can be accomplished with dry heat. As soon as you have obtained the vacuum, irrespective of the method employed, break the communication between the inside of the flask and the outside air by turning the stopper sideways so that the lower opening of the canal in the stopper (*F*) will no longer be in communication with the groove (*C*) on the inner surface of the neck of the flask. Attach a needle (*G*) to stopper directly or by means of a con-

* From the Bacteriologic Department of the Long Island College Hospital.

of the trouble with his legs and the fact that he was coughing up large quantities of black matter. He continued to cough up much of this black sputum for a year and a half after leaving the mill. For the first year that he was away from the mill, his symptoms gradually progressed until he was almost unable to walk. His speech became affected, and his family had difficulty in understanding what he said. This condition continued until the spring of 1909, when the patient began to improve a little. He became more steady on his feet and his speech was more distinct. He has progressed very slowly since that time. At present he gets around fairly well with the aid of a cane. He cannot walk backward or go down hill without falling. His speech is not entirely clear, his writing is still small and cramped. His memory is perfect; sexual power was preserved.

Physical examination showed a fairly well-developed man of 49 years, weighing 141 pounds. His face was somewhat mask-like and expressionless, and he was unable to whistle. The eyes were entirely negative except for a corneal scar in the right eye, resulting from an old injury, with the iris healed in it. Dr. E. B. Dench made the following report on his ears:

"The reactions of the labyrinth on each side and of each auditory nerve are normal. There was only an insignificant middle-ear condition. I should, therefore, place the auditory impairment in the reception center."

There was a fine intention tremor of the hands. All deep and superficial reflexes were active and equal. There was no Babinski or clonus. The patient showed a tendency to propulsion in his gait which became marked when he went down an incline. He was unable to walk backward without falling. Asynergia was marked in all tests; no ataxia. The electrical reactions of the muscles of the arms and legs were normal in every respect. Sensation was perfectly preserved throughout. The lungs and heart were negative, blood-vessels soft, blood-pressure 126 to 140 m.m. Analysis of the stomach contents showed slight subacidity. The urine showed nothing abnormal except a considerable excess of indican. The blood was normal; no anemia, hyperleukocytosis or changes in the differential count. Wassermann reaction of the blood-serum was negative. The spinal fluid showed the following: Wassermann negative; globulin content normal; cells 3 lymphocytes per cubic millimeter. Fehling's reduction positive—a negative fluid.

The course of the condition is chronic. None of the patients has recovered. Most of them improve when removed from the dust and especially from the magnet floor. Three patients have made little or no improvement. The duration is a matter of years, and while the condition is never fatal, the prognosis for recovery is extremely poor.

Only one of the cases on which this paper is based has come to autopsy. The patient showed the symptoms in rather marked form and died of pneumonia. I am sorry not to be able to report the findings in full, but the material is not as yet ready for sectioning. Grossly, the brain and cord showed nothing abnormal. There was no arteriosclerosis of the larger vessels or any areas of softening. From rather superficial inspection of the brain-stem blocks before imbedding, it would appear that the perivascular spaces of the lenticular nuclei and the outer part of the optic thalami are considerably larger than normal. These are not unlike the "lacunae" described by Marie in certain cases of cerebral arteriosclerosis. These are only mentioned in passing, as I do not at present care to lay too much stress on them as of pathologic importance. No gross tract degenerations were seen anywhere. There were no gross changes in the kidneys, liver or spleen.

I feel that this series of peculiarly similar cases represents a definite disease picture, the cause for which must be found in the working conditions or the material which the men handle. It has been a problem to determine the real causative factor. Zinc, of course, was the one first thought of, but zinc has been regarded for years as a harmless metal, in so far as its effects on the nervous system are concerned. Popoff[1] described a case of general muscular atrophy with gastro-intestinal symptoms in a bronze worker which he ascribed to zinc, but it does not correspond with our cases. Edsall,[2] with an extended experience among zinc workers, believes that zinc never causes a systemic poisoning. Schlockow,[3] in 1879, reported a peculiar disease which he had observed among some workers in a zinc mine in upper Silesia; the symptoms these patients exhibited were similar in many respects to those I am considering here. There was marked intention tremor, but the most prominent symptom was gait disturbance which he described as "stiff, hurried and unsteady." Asynergia was certainly present. The reflexes were normal. The author considered it a spinal-cord disease due to zinc poisoning, although he had no autopsy material to substantiate his theory.

It is interesting to note that the ore taken from this mine in Silesia was not unlike that which our patients handled, in that it contained a considerable quantity of manganese, but there was also lead and arsenic in this Silesian ore, which possibly accounted for some of the symptoms Schlockow reported.

Since zinc cannot be blamed for this intoxication, one must next turn to the other principal metallic substance, manganese. The toxicology of this metal is little known owing to its restricted use. Of all disease pictures reported in literature, none more closely resembles the cases here presented than does that reported by Embden[4] in workers in a manganese dioxid grinding-mill. He reported four cases which occurred in men who worked in an atmosphere of manganese dioxid dust. They showed general muscular weakness, but no atrophy; mask-like face, with inability to whistle. The gait was unsteady, and there was a tendency to fall forward especially on going down an incline. Retropulsion was marked. All tendon reflexes were active and equal. There was a coarse intention tremor which, in some cases, made writing difficult. Voice was slow, unsteady and monotonous. One patient had impulsive laughter. There was no sphincter trouble. Manganese was found in the urine. These symptoms came on after the patients had worked a few months in the manganese dust.

It has been suggested that possibly the high-power electromagnets among which most of these men have worked might play some part in the etiology of the condition. It is difficult to conceive of this as a primary cause, as there are other places where men work in high-power electric fields in which such a condition must have been observed long ago. When one considers, however, that all but one of our patients developed the symptoms while working on the floor with the magnets, it must be admitted that possibly this factor plays an etiologic rôle.

A final word on the absorption and excretion of the poison. Absorption must take place through either the lungs or the alimentary tract. The density of the air dust makes it impossible to avoid inhaling the dust into the lungs. In all the cases there was a history of spitting

1. Popoff: Ein Fall von chronischer Vergiftung mit Zinkoxyddampfer und Experimente über die Wirkung einiger Antifermentative Mittel, Berl. klin. Wchnschr., 1873, p. 49.
2. Edsall: Article in Osler's Modern Medicine, p. 138.
3. Schlockow: Ueber ein eigenartiges Rückenmarksleiden der Zinkhuttenarbeiter, Deutsch. med. Wchnschr., 1879, p. 208.
4. Embden: Zur Kenntnis der metallischen Vergiften; über die chronischen Manganvergiftung der Braunsteinmüller, Deutsch. med. Wchnschr., 1901, p. 795.

up of dark sputum long after the man had stopped working in the mill. Nevertheless, it is doubtful whether absorption of heavy metal ever takes place through the lungs, as inspired dust is probably all coughed up or stored in the lymph-nodes and tissues. The gastro-intestinal tract is probably the portal of entry. In the first place, manganese is soluble in hydrochloric acid and thus probably much of the manganese content of the swallowed dust leaves the stomach in absorbable form. The absence of gastro-intestinal symptoms is probably due to the small amount of the poison in the intestine at any one time.

Of the excretion, little is known. The excretion of most mineral poisons takes place principally through the intestines, with the kidneys as secondary. On one occasion, specimens of urine were taken from four men working on the magnetic machine, none of whom showed any symptoms, and, in each of the specimens, definite traces of zinc and manganese were found. Four urines from other workers in the mill were analyzed and showed no trace of the metal. It was suggested that possibly in the magnetic field the manganese molecule was so altered that its solubility in blood-serum was increased. To determine this, experiments have been made by shaking up the manganese-bearing ore in rabbit's blood-serum both in the magnetic field and out of it. No difference in the solubility could be determined. To speculate on the question why so few of the men employed in the work developed this condition takes one into the field of individual susceptibility, and thus far from the purpose of this paper.

CONCLUSIONS

1. This is a definite pathologic condition, recognizable by a definite symptom-complex.
2. It is a pathologic condition of the central nervous system affecting principally the mechanism of walking and equilibrium.
3. It cannot be placed under the heading of any known central nervous system disease.
4. It is of toxic origin, and in greatest probability the toxic agent is manganese.

This paper is offered as a preliminary report of a more extended work now being done, together with Dr. F. P. Wilbur, to whom my heartiest thanks are due.

342 West Fifty-Sixth Street.

A NEW APPARATUS FOR USE IN BLOOD-CULTURES*

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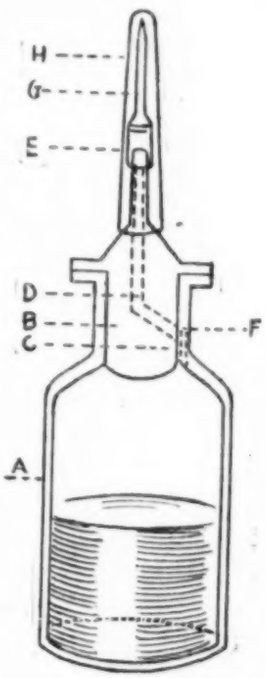
Of all the clinical methods as yet devised for the purpose of diagnosis, prognosis and treatment of disease, there is no single method which finds so wide a range of usefulness and importance and gives results which are so definite as that of blood-cultures. Yet the general practitioner seldom avails himself of the method of culturing bacteria in the blood, its use being restricted mainly to hospital practice. This is due to the difficulty of procuring the blood. By the methods at present in use the process of obtaining blood is exceedingly cumbersome, and contaminations are frequent, so that one has to have special training in this line of work, for otherwise the results are not only unreliable but also even misleading.

By the use of the method devised, the practitioner can avail himself of blood-cultures as readily as of the Widal reaction in typhoid.

DESCRIPTION OF APPARATUS

The apparatus is composed of a glass bottle (*A*), containing a ground air-tight stopper (*B*); along the lower half of the inner surface of the neck of the flask there is a longitudinal groove (*C*). The stopper contains a longitudinal canal (*D*), which opens above at *E*, and below the canal is continuous obliquely downward and outward, opening at the ground side of the stopper, at *F*, which lies below the upper level of the groove (*C*). It is evident that if the stopper is placed in the bottle so that the lower opening of the canal (*F*) opens into the groove (*C*) on the inner surface of the neck, the inside of the flask will be in direct communication with the outside by means of the groove (*C*) and the canal (*D*).



Apparatus for obtaining blood-cultures. *A*, glass bottle; *B*, air-tight stopper; *C*, groove in neck of flask; *D*, canal in stopper; *E*, upper opening of canal; *F*, lower opening; *G*, needle; *H*, test-tube. In this view of the apparatus the canal (*D*) is in communication with the groove (*C*). By turning the stopper this communication is broken.

It is also evident that rotation of the stopper sideways, so that the lower opening of the canal (*F*) no longer opens to the groove (*C*), shuts off the inside of the flask from all communication with the outside (to facilitate rotation of stopper a lubricant such as graphite is recommended). Place in bottle 0.5 gm. of finely powdered sodium chlorid, or 10 c.c. of 1 per cent. solution of ammonium oxalate in normal saline. Replace stopper so that there is communication between the lower opening of the canal in the stopper (*F*) and the groove (*C*) on the inner surface of the neck of the bottle. This will afford direct communication between the inside of the flask and the outside air.

Next produce a vacuum in the flask. This can be accomplished in several ways, either by a water-pump, vacuum-pump or by the simple aspiration of the air with an ordinary syringe or mouth (as suggested by Mr. Layton). I found that the simplest way of producing a vacuum and at the same time sterilizing the contents of the flask is by placing the flask in water (or brine) with its neck above the level of the fluid, and then boil the water or suck the air out with the mouth. The heat will rarify the air in the flask and thus a partial vacuum, sufficient for all practical purposes, will be produced. The same result can be accomplished with dry heat. As soon as you have obtained the vacuum, irrespective of the method employed, break the communication between the inside of the flask and the outside air by turning the stopper sideways so that the lower opening of the canal in the stopper (*F*) will no longer be in communication with the groove (*C*) on the inner surface of the neck of the flask. Attach a needle (*G*) to stopper directly or by means of a con-

* From the Bacteriologic Department of the Long Island College Hospital.

necting piece of rubber, cover needle with test-tube (*H*), and sterilize the entire apparatus by boiling or by dry or steam heat. The apparatus is immediately ready for use or at any date in the future. (The vacuum keeps.)

USE OF APPARATUS

To use the apparatus, paint the bend of the elbow with tincture of iodin (or sterilize the part by any other method), plunge the needle into the median basilic or cephalic vein, and then rotate the stopper so that the lower opening of the canal (*F*) communicates with the groove (*C*) on the inner surface of the neck of the flask. The vacuum in the flask will rapidly suck in the blood from the vein.

Having obtained the desired quantity of blood, 10 c.c. being quite sufficient for all practical purposes, break the communication between the inside and outside of the flask by rotating the stopper sideways and then remove the needle from the vein. Cover with collodion the opening in the skin caused by the entrance of the needle.

The flask containing the blood is now thoroughly shaken. The sodium chlorid or the ammonium oxalate used prevents the blood from coagulating, but is not bactericidal. In fact, the bacteria commonly found readily multiply in it.

The blood thus obtained can now be taken to the laboratory and subjected to the usual process.

When the typhoid bacillus is suspected to be the infective organism, instead of ammonium oxalate solution or salt, 10 c.c. of bile are put into the flask, and after the blood has been obtained in the manner described, the mixture is incubated in the flask without further manipulation. Likewise, when the pneumococcus is suspected as the cause of the bacteriemia, a slightly alkaline solution of 10 per cent. peptone is placed in the flask, and 1 per cent. dextrose as recommended by Wiens, and after the blood has been obtained the flask is incubated. Experience has convinced me that practically all microorganisms found in the blood grow readily on bouillon or glucose bouillon, so that if the blood is obtained in a bottle containing the latter medium and the mixture incubated, no further manipulation of the blood is necessary.

THE ADVANTAGES OF THIS METHOD

1. Contaminations are absolutely excluded, for the blood does not come at all in contact with the air as the multiple manipulations of the blood are dispensed with, the flask acting both as a syringe and as a container of the nutrient medium.

2. The general practitioner of the city or country can avail himself by this method of blood-cultures, for the attending physician can procure the blood when he visits the patient, and the flask can be brought to any laboratory for further examination. All one has to determine from now on is the microorganism present; and it means no more than the determination of any microorganism when pus is inoculated on an agar tube. Hence the expense to the patient is but trivial. The cost of blood-cultures by the present method is prohibitive for most patients. Furthermore, by the present method, the country practitioner could not avail himself of blood-cultures. By this method he can send the flask containing the procured blood to the nearest laboratory for further examination. The flask can be placed and shipped[1] in a vacuum bottle or in the center of a roll of cotton wool which would prevent the lowered temperature from destroying the bacteria in the blood.

3. The sight of syringes, needles, test-tubes, flasks, mediums, etc., frighten the patient, who in most instances anticipates a major operation. With this method he at the most anticipates no more pain than is caused by a hypodermic needle.

4. One has at all times a sterile apparatus which can be used at once as the occasion arises.

5. As the entire apparatus can be easily carried in the vest pocket, it is very convenient for obtaining blood outside of the laboratory.

6. The obtaining of blood with this apparatus is so simple that any one can undertake it.

7. By the use of this apparatus a nice clear serum is obtained without hemolysis of the red cell, which is a particular advantage when the blood is obtained for Wassermann, Widal, miostagmin or cancer reactions. Of course this apparatus can be used for obtaining blood for any serologic purpose.

8. The apparatus saves the outlay for expensive syringes, and furthermore will last a lifetime.

907 St. Marks Avenue.

1. According to the postal regulations (given in THE JOURNAL A. M. A., March 6, 1909, p. 791), cultures and diseased tissues are unmailable to private laboratories or persons; they must therefore be transmitted by messenger or express.

A METHOD OF TONSILLECTOMY BY MEANS OF THE ALVEOLAR EMINENCE OF THE MANDIBLE

A NEW GUILLOTINE AND A SNARE *

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ST. LOUIS

The essential and only original features of this method consist (1) in dislocating the tonsil out of its soft movable bed in a direction upward and forward to the point where is met the eminence on the inner side of the lower jaw made by the last-formed molar tooth in its socket with the gum covering it, to which I have given the name "alveolar eminence of the mandible"; (2) in putting the tonsil through the guillotine by the eminence alone (see below) or with the aid of the finger on the anterior pillar. All efforts to move the tonsil forward and upward or upward and forward for surgical purposes must needs involve the service of this eminence more or less as will be seen when the topography of this area is studied. On June 9, 1910, I presented this method to the American Medical Association at its meeting in St. Louis,† with patients, specimens, etc. The text of this presentation was published in THE JOURNAL,[1] but not as a part of the proceedings of the 1910 meeting. Since then I have written two papers[2] dealing with this technic for purposes of narrating further clinical experience with it, and for considering further developments in its instrumentarium at the

* Read before the American Academy of Ophthalmology and Oto-Laryngology at Niagara Falls, Ontario, Aug. 20, 1912.

* Because of lack of space this article is abbreviated in THE JOURNAL by the omission of the history and description of the guillotine, anatomy, etc. The complete article appears in the author's reprints.

† THE JOURNAL A. M. A., July 2, 1910, p. 60.

1. Sluder, G.: A Method of Tonsillectomy by Means of a Guillotine and the Alveolar Eminence of the Mandible, THE JOURNAL A. M. A., March 25, 1911, p. 867.

2. Sluder, G.: A Method of Tonsillectomy by Means of a Guillotine and the Alveolar Eminence of the Mandible, Tr. Am. Laryngol., Rhinol. and Otol. Soc., 1912; Tonsillectomy with Presentation of Specimens Removed by the Author's Method, Jour. Missouri State Med. Assn., March, 1912.

hands of several friends of the method. In this paper I shall consider the subject from these two aspects again with the authority of a somewhat greater experience.

CLINICAL EXPERIENCE

The effort to execute a tonsillectomy by means of a fenestrated instrument, placing its ring behind the tonsil and using it to pull the tonsil forward and upward, relying on pressure on the anterior pillar or tucking with the finger to put the tonsil through the aperture, must needs involve the service of the alveolar eminence of the mandible to a greater or lesser degree. In my experience the more familiar one becomes with the anatomy of this eminence and the more one utilizes it in this technic the higher becomes the percentage of perfect results. Furthermore, for much of the repair work — that is, removal of pieces that have escaped the first setting of the guillotine — an intimate knowledge of the construction of this eminence is absolutely necessary. When the surgeon becomes familiar with this construction I believe that he can repair all faults of the first setting of the guillotine to an extent which will bring his results up to 99.5+ per cent.

The lymphoid tissue of the lingual is apparently continuous with that of the faucial tonsil above. Occasionally, I have seen wounds heal perfectly and remain so for three or four months; but a year later they showed a well-defined mass, resembling the original tonsil, which had grown up from the lateral aspect of the lingual tonsil into the site of the removed faucial tonsil. Twice I saw lymphoid tissue transplanted on the wound of a perfect tonsillectomy.

In a recent paper[2] I stated that I thought there arose about once in three hundred tonsil cases a condition of (or with) the alveolar eminence that did not lend itself to perfect execution of this technic and that I had not been able to determine what it was. More recently, I believe that I have made out that at least a part of this condition is due to the fact that the eminence lacks its convexity, being, instead, a sulcus whose transverse boundaries are the free margin of the alveolus above and a very highly emphasized mylohyoid line below. This condition is rare in childhood but somewhat more frequent in later life. I believe this to be the anatomic explanation of a part of the 0.4 per cent. of failures. The remaining part is explained by an unusually high setting of a thin, soft tonsil in the soft palate, in some instances even touching the uvula. Such a tonsil may usually be secured in the grasp of the guillotine (upper part first); but should a thin piece escape in the upper pole of the wound it will sometimes be found impossible to repair this fault. A thicker piece of tonsil is almost always easily removable wherever it may be.

Another source of difficulty in the employment of this technic is peritonsillar infiltration. The feature on which the possibility of this method depends, altogether, is the difference in consistency between the tonsil and its environing muscular and membranous tissues. Therefore, in so far as this difference is lessened, either through softening of the tonsil or through hardening of the peritonsillar tissues, as from peritonsillar phlegmon, just so much are the technical difficulties increased and the certainty and accurate security of its execution decreased.

At present, I feel that after the surgeon is thoroughly familiar with the alveolar eminence of the mandible it is almost uniformly a peritonsillar infiltrate that prevents a perfect enucleation with the first setting of the guillotine (save, of course, the rare exception in the eminence, cited above). The flaw will be found to vary from a pin-head buttonhole in the capsule, made by an adherent point, to a patch of capsule 8 or 10 mm. in diameter with more or less (sometimes none) of the tonsil tissue with it, remaining *in situ*. About 5 or 7 per cent. of tonsils require a second setting of the guillotine.

Peritonsillar infiltrates, however, are not a bar to the employment of this method. The surgeon learns to estimate them by recognizing a thicker layer of tissues over the ring of the guillotine after he is reasonably sure that the tonsil has all been put through either on the eminence alone or stroked or kneaded through with the finger, according to his election. He learns to recognize this thicker layer either by his sense of touch during the operation or sometimes by its appearance. I believe that he will learn to estimate it by touch first; and he will always recognize it more accurately by touch. If the infiltrate be recognized the surgeon can usually complete his operation by being more careful in his manipulations and more deliberate in his judgment of when to do the cutting. He must also be very careful lest the setting of the tonsil slip in the grip of the guillotine, even after he is sure that he has it. This happens much more easily than might be thought, under these circumstances.

I employ this method for all tonsils under all circumstances with any anesthetic or without one and have been successful to the extent of 99.5+ per cent. perfect results (during the last eighteen months). I operate preferably under nitrous oxid, a plea for which was admirably presented by A. C. Gundelach[3] last year. The instrument I use is the modification of the Physick guillotine that is described and pictured in my first text[1] on this subject. I have not been able to obtain so high a percentage with any of its modifications. The average bleeding for 310 children from 2 to 15 years old in the St. Louis Children's Hospital was 70 c.c. (4⅔ tablespoonfuls) for both faucial and pharyngeal tonsils, under nitrous oxid anesthesia.

INSTRUMENTARIUM

In the construction of the first model of the guillotine I gave careful consideration to several things. It was the product of the six years' development period of this technic. The shaft was strengthened so that it would not bend while in use. Its length was carefully adjusted so that it should be just right — a shaft too short hampers the movement of the surgeon's hand and one too long rapidly loses its leverage. The angle at which the handle was attached to the shaft was proved by experiment to be the most advantageous for the surgeon's grip and wrist movements. The shape and sizes of the aperture were determined to be the most advantageous. The extension of the thumb-piece of the blade beyond the handle was decided by experiment to be that which left the blade under the most nearly perfect control of the surgeon in whatever position his wrist might necessarily turn, and under circumstances of great or little strain. For these reasons I felt it worth while to accompany its description by mechanical drawings with a scale for measurement, that the surgeon might know whether the instrument which had been sold to him corresponded to the one described.

This instrument had, however, one shortcoming for many operators. The blade was made or should have been made dull. The dulling of the blade is absolutely necessary in order that it may follow the connective

3. Gundelach, A. C.: Nitrous Oxid Anesthesia in Tonsil and Adenoid Operations, Interstate Med. Jour., November, 1911.

tissue bed between the capsule and the constrictor muscle. This was emphasized in the original text. This feature, however, seems to have made difficulties for many operators. They have complained that although they could secure the tonsil satisfactorily they could not squeeze the blade with enough strength to make it cut through the tissues; and that they could not strip the tissues off from the end of the ring. Stripping the ring seems to me a very simple thing and easily done. I know, however, from personal observation that there are some experienced and skilful surgeons who cannot do this stripping — who seem to have no knack or aptitude for learning it. I have seen the tissues thus engaged in the guillotine amount to almost a major difficulty in their hands. For this reason, they demanded that their blades be sharp. In the substitution of the sharp for the dull blade the percentage of their satisfactory results decreased, and the consequent bleeding increased.

Fig. 1.—First stage: the introduction of the guillotine. (After Ballenger.)

Feeling that this technic offered a quick and certain means of securing the tonsil, several surgeons, friends of the method, including myself, have modified its instrumentarium with the desire to overcome these troubles; the results I record below.

Ballenger was its first champion.[4] He added three original pictures (Figs. 1, 2 and 3) which help greatly in explaining the text, and suggested a pistol grip handle (Fig. 4) to be put to the shaft, which closes the blade and gives the operator a chance to squeeze it to better advantage, thereby allowing the blade to remain dull. He has also described orally[5] a guillotine provided with two blades, one dull, for engaging and holding the tonsil in the grasp of the

Fig. 2.—Second stage: the tonsil has been drawn forward and upward onto the eminence and the blade has been closed. (After Ballenger, slightly altered.)

instrument and bruising the blood-vessels, and the other sharp, which is pushed across the ring for cutting off the tonsil. The dull blade helps to control the bleeding; the sharp one avoids the troubles previously cited. Ballenger also mentions that his écraseur lends itself to the technic.

Next, Luther C. Hood used the guillotine as a forceps to secure the tonsil and then passed a snare over the entire instrument that he might do the cutting with it, thinking that the snare-wound would bleed less.

4. Ballenger, W. L.: Diseases of the Nose, Throat and Ear, 1911, Ed. 3, p. 428, Lea & Febiger, Phila.
5. Presentation of New Instruments, Tr. Am. Laryngol., Rhinol. and Otol. Soc., 1912.

Then J. C. Beck substituted a Pierce-Mueller snare with a Vedder tip (Fig. 5), using the fenestrated tip instead of the ring of the guillotine. He passes it behind and below the tonsil, draws it upward and forward or forward and upward and tucks the tonsil through the ring-tip with the finger, relying on the snare-wire (over which he then no longer has control) to follow in the connective tissue bed of the tonsil for a perfect enucleation, thinking the snare-wound would bleed less.

Fig. 3.—Third stage: the handle has been rotated downward to clear the field of operation and the finger of the other hand introduced to feel the distal arc of the aperture, recognizing whether the tonsil has all gone through the aperture, and pushing it through if necessary. (After Ballenger.)

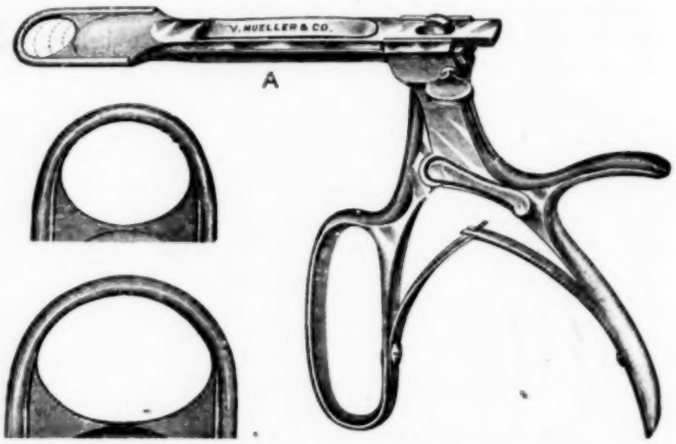

Fig. 4.—Sluder's guillotine with Ballenger's handle.

A little while later W. E. Sauer, adhering largely to the original, turned the thumb-piece downward to lie parallel to the handle and perforated it with a screw which took its hold in the handle (Fig. 6). Thus he is able to put the power of the screw in pressure for the final cutting, thereby permitting the use of a blunt blade, 1 mm. in thickness at its free edge, likening this to an écraseur and so controlling the bleeding.

Each of these modifications has features of distinct advantage, as well as some that are less advantageous.

According to my experience, each lacks the leverage of the original model and the absolute command that the surgeon readily exercises with it. Ballenger's instrument is perfect except that in certain positions of the wrist the flexors of the forearm must work under great disadvantage thereby losing some of their power. Hood's

Fig. 5.—Beck-Mueller tonsillectome.

modification of the technic is perfect except that it prolongs the procedure somewhat and introduces a more complicated and less trustworthy instrument, the snare. Beck's instrument in my hands is more unwieldy and much less accurate in its execution than the original. In all of the guillotines the margins of the gap, in which the final cutting is to be done, are rigid—strong enough to withstand great pressure — so that, when in use, with the blade being pushed across, slowly narrowing the gap, the surgeon may tuck the tonsil through despite a peritonsillar infiltrate, which may sometimes then require great pressure and make it difficult. The rigidity of the narrowing gap makes this possible with all the guillotines.

In Beck's instrument the narrowing gap which is to do the cutting is a snare-wire loop concealed and protected in the Vedder tip. As soon as the snare is pulled the loop is released from its rigid protector. It must then be trusted to follow in the connective tissue bed. Frequently it does follow nicely, especially if there are no adhesions between the capsule and the subjacent tissue. But should it not do so the surgeon has not the power to tuck the tonsil into it because he has nothing rigid to resist his pressure; the flexible wire bends

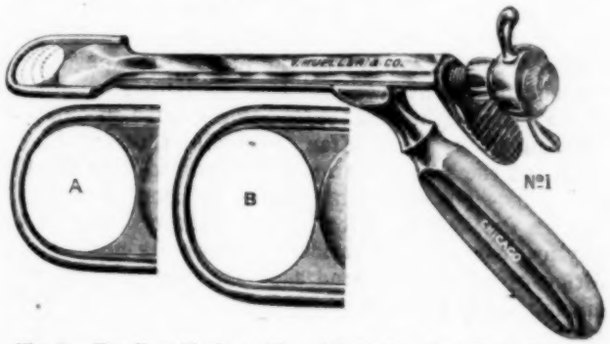

Fig. 6.—Tonsil guillotine with a dull blade. Sauer's modification. The instrument is made in two sizes, *A* and *B*.

with the tissues. He therefore has no rigid ring over which to pass the finger-tip in forming his final judgment of when to cut. For these reasons the repair work which may be frequently necessary cannot be done, especially the removal of thin tough pieces, which is quite possible, usually, with the original model. A small finger-tip is also a disadvantage for Beck's instrument. In other respects it is admirable, possessing the advantage of the slowly strangulating snare.

Sauer, in his modification, has retained the original largely and has added a power screw which permits of great pressure slowly applied; under his blunt blade this is the equivalent of the snare-wound. It, however, lends itself less advantageously to the surgeon's grip and wrist movements than the original; and the blade, being blunt, sometimes permits escape of small parts despite great care. In the effort to prevent this Sauer has added a ratchet which prevents backward slipping of the blade. In my experience, difficult repair work cannot be done with a blunt blade. Were

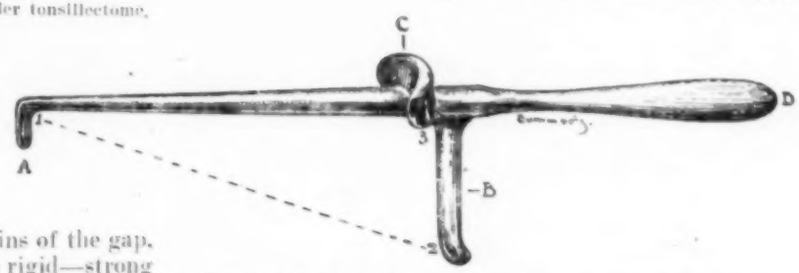

Fig. 8.—Mechanic's "dog." *A*, the hook for engaging in the shaft of the guillotine; *B*, "prong" for pressure on the thumb-piece of the guillotine. The "pitch" or biting distance of the "dog" is the difference between the distance from 1 to 3 and from 1 to 2, or about ½ cm. *C* is a flange arising from the shaft, which fits into the crotch between the thumb and forefinger, to prevent slipping of the hand when a single hand is used to do the compression of the dog to the guillotine. *D* is the handle of the "dog," made in such form that it serves as a tongue-depressor.

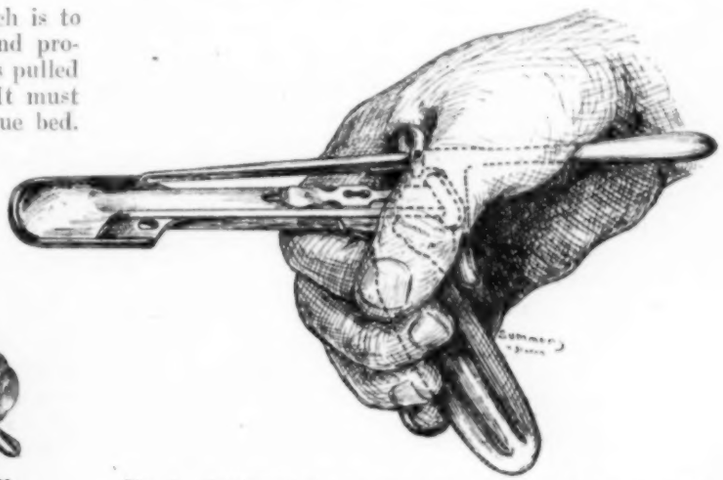

Fig. 9.—Setting of the "dog" to the guillotine and compression by one hand. In this position the cutting may be done as slowly or as rapidly as the surgeon may elect. The power of the "dog" thus applied is very great.

it not for these defects it would, to my mind, be the ideal instrument.

In the effort to meet the desires of all operators and to remove the shortcomings of the method in their hands, I, too, have tried to devise some instruments.‡

After a trial of all the modified instruments and their usages, including my own, I so much prefer the original model that I have been to some pains to preserve it and still meet the requirements of all operators. Therefore, I have supplied it with increased power (that may be instantly or slowly applied), which shall be strong enough to make the dull blade cut through. In comparing the wounds made by a dull blade and a snare-wire

‡ Tr. Am. Acad. Ophthal. and Oto-Laryng., 1912.

I have not been able to determine any difference from the standpoint of hemorrhage; for instance, between Beck's snare and Ballenger's, Sauer's or my own blade, which may now be dulled or even blunted to a degree to please the individual operator. In my opinion it must not, however, be blunted too much, or the tissues will slip from under its grasp, and the difficult repair work cannot be done with it; it will slip over instead of cutting under the piece which is to be removed. (See above.) I have been able to add this power to the original by means of what is described as a mechanic's "dog" (Fig. 8). It consists of a lever with a hook on the distal end which is engaged in a hole made in that part of the shaft which becomes exposed after the blade has been pushed across the aperture. At the point of the thumb-piece (after the blade is closed), is given off an arm 2½ inches long at a right angle. As the "dog" is applied the thumb-piece is carefully engaged just under the tip of the arm. The shaft of the lever is then pushed down to make it lie parallel to the shaft of the instrument. This may be done as a combined movement with two hands; or may be accomplished with one hand as shown in Figure 9. The distance between the hook and the thumb-piece has thereby been shortened to the extent of the difference between the hypotenuse of the right-angled triangle (Fig. 8, 1, 2, 3) and its next longest side (about one-fourth inch). The squeezing power of this leverage will be found to be very great. It may be applied as slowly or rapidly as desired. The handle of the "dog" makes an excellent tongue-depressor.

Dr. George Fetterolf[6] has described in a most masterly fashion the anatomy of the tonsil with special reference to the plica triangularis, and seems definitely to have cleared up our ideas concerning this structure. He explains that it will be observed from the study of the anatomy that the tonsil is not a structure that may be removed by a single instrument. It is to be noted that the above-described technic in its entirety pleads the exact contrary. I believe from his text, however, that Fetterolf is unfamiliar with this technic.

In the original description of this method[1] the history and description of the guillotine, anatomy, etc., are given as well as I know them.

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EXERCISES IN THE TREATMENT OF PTOSIS OF THE ABDOMINAL ORGANS *

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In looking over the literature on this affection one finds certain writers whose names stand out prominently, on account of the particularly elucidative work they have done. Such are Glénard, after whom the affection has been named, Stiller[1] because of his remarkable book on asthenia, Lovett and Reynolds[2] of Boston on account of their scholarly work on the center of gravity of the body and the effects of that center being displaced. Among others M. L. Harris[3] of Chicago has also made extensive studies of the body form and its relation to the proper position of the viscera.

That the study of this affection is important impresses one strongly when one considers that the condition which Stiller calls asthenia can be looked on, and no doubt is, synonymous with what other writers have described under the name of status phthisicus.[4]

The condition being so predominantly a mechanical one, it would naturally stand to reason that mechanical forms of therapeutics, particularly gymnastic exercises, ought to take a prominent place. But, along what lines should such efforts be directed? Most writers have found a solution of the problem in the form of specially constructed corsets or in various types of adhesive plaster bandages. Last year Dice[5] and McCaskey[6] described very much the same thing, namely, the application just above the symphysis of a short adhesive strap by means of which the abdomen is lifted up through a belt around the hips, one having it tightened by a buckle and strap arrangement, the other by a lacing device. Both were enthusiastic about the good effect of their apparatus in cases of gastroptosis, neither being aware of the similarity of the two devices. On reading these articles it occurred to me that if the tonus of the obliquus abdominis externus on each side could be developed by training one would have exactly the same effect as that produced by the bandages.

While most writers on the subject of ptosis of the abdominal organs recommend gymnastic exercises as an important feature in the treatment, few have given a detailed description of how and why. All seem to agree that the abdominal walls are relaxed, that there is a more or less pronounced lumbar lordosis together with a condition of round shoulders, flat-chestedness and acuteness of the so-called epigastric angle as being the gross features of changes of bodily shape that go with ptosis of the abdominal organs. From a gymnastic point of view the correction of these conditions would consequently be to straighten the upper spine, to develop the chest, to increase the capacity of the lungs, to strengthen the abdominal walls and to overcome the lordosis. But these are just the things accomplished by a rational system of gymnastics. If one studies the Ling system, one cannot help being impressed by the idea that it seems to be constructed just for the purpose of preventing or overcoming this particular condition. These facts might give reason for extensive speculation, particularly as to children, especially those that have inherited the so-called stigma or predisposition for this affection. The question nearest to hand then is, Is enough detailed attention given to the question of the physical education of children to-day? Is not the condition of flat chest, round shoulders, pot-belly common enough among school children to deserve the special study of our educators, so as to prevent them from sooner or later falling prey either to the neurasthenia that goes with this affection or to tuberculosis?

For the purpose of classification, one might group the patients as follows: (1) those that have inherited, and (2) those that have acquired the condition.

6. Fetterolf, G.: Anatomy and Relations of the Tonsil in the Hardened Body, Am. Jour. Med. Sc., 1912, i, 37.

* Read before the North Shore Branch, Chicago Medical Society, Dec. 3, 1912.

1. Stiller, Berthold: Die asthenische Konstitutionskrankheit. Stuttgart, 1907.

2. Reynolds, Edward, and Lovett, Robert W.: An Experimental Study of Certain Phases of Chronic Backache, THE JOURNAL A. M. A., March 26, 1910, p. 1033. Reynolds, Edward: Tr. Am. Surg. Assn., xxviii, 473

3. Harris, M. L.: Movable Kidney: Its Cause and Treatment, THE JOURNAL A. M. A., June 1, 1901, p. 1527.

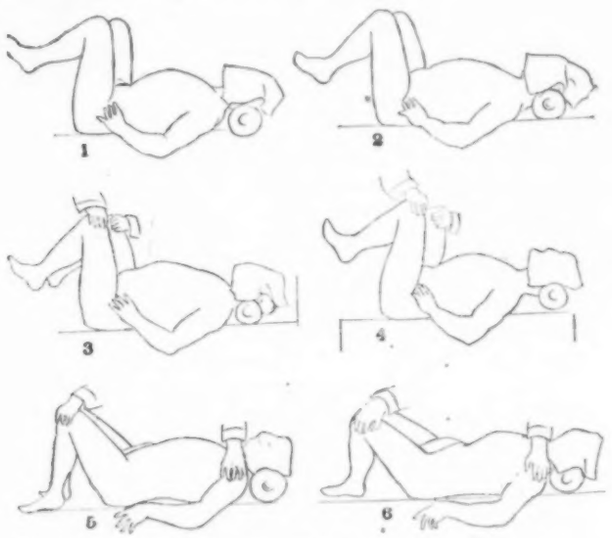
4. Möller, Axel T.: Svenska Gymnastiken i In- och Ut-landet, 1911, p. 196.

5. Dice, S. D.: A Plaster Support for Gastroptosis, THE JOURNAL A. M. A., Sept. 30, 1911, p. 1125.

6. McCaskey, G. W.: A Simple Method for the Mechanical Treatment of Glénard's Disease, THE JOURNAL A. M. A., Oct. 28, 1911, p. 1454.

In the first class we have (*a*) children under puberty, and (*b*) those having attained physical development.

In the second class we have (*c*) women whose abdominal walls on account of frequent pregnancies are so relaxed that their organs have become displaced, (*d*) those who have acquired the condition through accidents or because of the character of their work.



Figs. 1 and 2.—Abdominal breathing with the knees raised.
Figs. 3 and 4.—Same as 1 and 2, but with downward pressure against the knees by the operator.
Figs. 5 and 6.—Swinging of the knees from the middle line to the side under exhalation, with resistance by the operator. (These would have been better with the feet raised so that the thighs are at right angles or less with the trunk.)

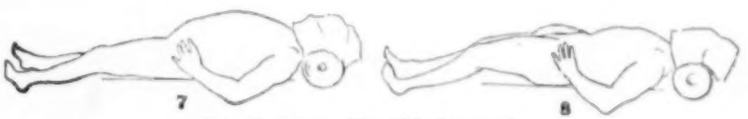
Speaking of Group 1*a*, there is no doubt that good hygiene, plenty of outdoor exercise, and particularly daily gymnastic exercises of a rational kind carried out through their school years will do much to lessen or perhaps even entirely remove that inherited predisposition for this affection.

Of Group 1*b* we no doubt can say the same as about the preceding. Hygiene and outdoor and proper gymnastic exercises would be beneficial indeed; but here one meets the difficulty that the patients do not find the time and have not the perseverance necessary to accomplish results. As far as my limited experience goes these are the cases in which one will have the least success.

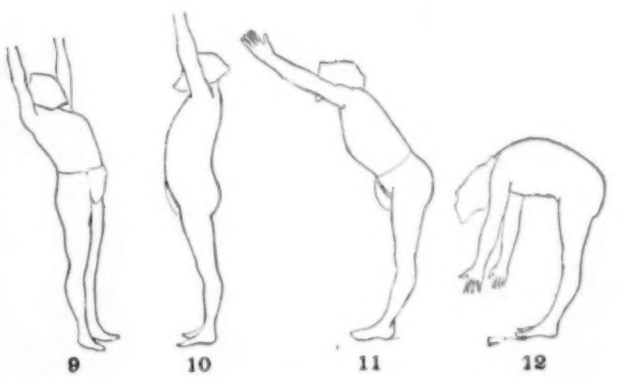
As concerns Groups 2*c* and 2*d*, I can best give my views on that by describing the routine way in which we treat this class of patients at the Central Free Dispensary. The patient is first placed prone on the table or bench and given a thorough manipulation of the tender muscles of the back, particularly those on both sides of the spinal processes and the edges of the trapezius; the latter are massaged in order to relieve the headaches that most of these patients are suffering from.[7] After the back has been thoroughly manipulated we try to mobilize the spine somewhat by fairly strong pressure on various portions of the back while the patient exhales.[8] We then turn the patients over on their backs and give a thorough massage of the abdomen for the purpose of stimulating the peristalsis, as almost all these patients suffer from constipation. The abdominal massage also has a tendency to increase the appetite. Then we begin with the exercises for training the muscles of the abdominal wall, and teach the patients abdominal breathing. Their knees being flexed we try to induce them to make a strong exhalation while contracting the abdominal walls. This takes a little time as most of them are chest breathers and are not in the habit of using their abdominal muscles.

The next in order is to teach them to pull their knees up while exhaling. Starting with the knees raised so that the thighs are at right angles to the body, the patients are told to pull them still higher while they blow out audibly. Later on the operator makes a resistance to the motion of the knees, this resistance being graduated according to the strength of the patient. When the patients after a time have learned to do these exercises with comparative ease, we increase the resistance to the motion of the knees to such a degree that the patients cannot move them, but have to hold them against the pulling of the operator while they do expire. Now they experience the real sensation of the lifting effect of the movement. Having advanced the patient that far one can add various exercises that will tend further to strengthen the abdominal walls, as for instance to swing the knees, feet still being lifted from the bench, from the middle line to the side with the operator resisting and the patient exhaling, or later to combine the swinging and the lifting of the knees by telling the patient to put the knees up toward the armpit, the operator resisting and the patient exhaling.

We also teach an exercise, described by Oldevig[9] of Dresden, in which the patient is lying flat on the back with the knees straight and one foot crossing over the other, slowly and gradually contracting all the muscles of the abdominal wall under exhalation, while the operator is making a slight resistance by pressing his hands over the trochanters. This exercise is a little hard to teach, but the intelligent patients soon learn. The fact about this exercise is that the muscular contraction is



Figs. 7 and 8.—The Oldevig exercise.



Figs. 9 and 10.—A comparison of the outlines of the body in ordinary erect standing position with the arms raised (Fig. 10) and in the "strain-standing position" (an exercise from the Ling system) in which (Fig. 9) the exercising person stands about the length of a foot away from the wall and leans back against the wall, resting against the forefingers of his extended hands, while he tries to push his hand up as high as possible, thereby causing a strong contraction not only of the muscles of the abdominal walls, but also of the extensors in the upper region of the back.
Figs. 11 and 12.—Two periods in the bending of the trunk forward and down with exhalation.

7. Müller, A.: Deutsch. Ztschr. f. Nervenheilk., Nov. 23, 1910, p. 235.
8. Taylor, Madison: Med. Rec., Oct. 17, 1908.
9. Oldevig, J.: Therap. Monatsch., November, 1910.

exactly the same as the one used in the act of defecation, except that the diaphragm is relaxed and rises with the contraction of the other muscles, and consequently the abdominal pressure does not increase to any considerable degree; thus the danger of causing hernia is removed. This exercise has the advantage also of causing the contraction of the muscles of the perineum and the pelvic floor, which increases the bearing capacity in this region. Before rising from the table the patients put on a simple abdominal supporter (the pattern of which we furnish, so that they can make it themselves). Of late we have started to use the adhesive-plaster bandage which Rosewater of Cincinnati has described.[10]

After the patients have had their individual attention as above described we stand them in line and let them go through a series of free standing respiratory and trunk exercises, such as arm-liftings and various simple bendings or twistings of the trunk, all of those, however, made in the rhythm of respiration, the patients being told to breathe in time with their movements.

This paper is not a dissertation on the comparative values of the different forms of treatment of ptosis of the abdominal organs, but a description of a few simple exercises which, whether used as an after-treatment following surgical intervention or following a prolonged resting in bed and feeding of a neurasthenic patient, seem to work toward the correction of ptosis. They have the advantage that they can be employed while the patient is still confined to the bed and consequently their beneficial effects start before the vicissitudes of the erect position are again encountered. They are also given for the purpose of calling attention to the fact that exercises cannot be given promiscuously. Particularly do we lay stress on the point that patients never should be allowed to hold their breath. As to the effects of the treatment our experience has been too short to enable us to give any reliable opinion.

I am indebted to Dr. Charles Spencer Williamson and Mr. Charles O. Carlstrom for their kind assistance in preparing the illustrations.

122 South Michigan Avenue.

THE CONSERVATIVE TREATMENT OF SALPINGITIS BY UTERINE AND TUBAL INJECTION

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In the light of experience we are enabled to practice more conservative and less radical or sacrificial surgery when treating infectious disease of the pelvic organs of women. Many of our gynecologic patients come to us after the acute symptoms of salpingitis have subsided, and every one knows that operations are comparatively safe at this time. This alone indicates the wisdom of conservative treatment of some kind. The almost universal success now attained in the surgical treatment of salpingitis by competent operators leaves little to be desired unless we appreciate the fact that patients are not always well afterward, even if their lives are not in danger. Of this part of the subject the last word has not been said. We have therefore ventured in many instances during the past two decades to attempt the complete sterilization of the uterine and tubal mucosa, and to leave at least one tube and ovary, or even part of a tube, and part of an ovary when the mucosa of the tube has not been hopelessly destroyed.

In selecting cases for conservative treatment, obviously the preference is given subacute cases rather than those that are acute or of long standing. The relatively higher mortality of operations must always be considered in treating the acute cases, while in very chronic cases, or those with great distention and long-continued suppuration within the tubes, the mucosa is no longer capable of physiologic action, and is in reality a pyogenic membrane. Therefore while the very large pus tubes may be reduced to nearly normal size or even absolute innocuousness by incision and drainage, in the Columbia Hospital clinic we do not select these for conservative treatment by irrigation. But we do not hesitate to attempt the sterilization of the more acute cases, as I shall show later on, and have not regretted doing so, as our results are even more satisfactory since the new method has been given a permanent place in our clinic. Some one may ask if our work is confined to the cases of gonorrheal salpingitis. An expression of opinion on this subject is made with hesitation owing to the uncertainty of diagnosis. The rule is to treat all cases conservatively unless the condition of the tubes when seen is absolutely hopeless for retention, provided no operation is undertaken on the adnexa of patients with streptococcic infection. The lesions due to this microbe when unexpectedly discovered should attract our attention and cause the abandonment of any radical operation if contemplated, and the autogenous vaccine treatment should be instituted. Pus tubes are caused by several other bacilli besides the diplococcus, for example, the *Bacillus coli*, staphylococcus and *B. pyocyaneus;* and even if the diagnosis is not certain, we can rely on the method now proposed quite as safely as for the gonorrheal form of salpingitis. The result of several years' experience has fully convinced us that many pus tubes can be rendered perfectly innocent and germ free, if not physiologically perfect—which we believe to be an object worthy of our careful consideration.

METHOD OF STERILIZING THE MUCOSA OF THE UTERUS AND FALLOPIAN TUBES

The cervix uteri is seized with tenaculum forceps, carefully dilated, and a blunt curet used if thought necessary. A 2-ounce glass syringe is selected with a conical point which will reach through the internal os uteri. An ounce of diluted tincture of iodin (1 part to 3 of alcohol) is drawn into the syringe and the uterine cavity is thoroughly distended by strong pressure on the handle of the piston. The pressure is continued for at least two minutes—a matter entirely under the control of the assistant who makes the application. The conical point of the syringe held firmly prevents the escape of the fluid until the operator is satisfied that the work has been well completed. The patient is now placed in the moderately high pelvis position, the abdomen opened and the pathologic conditions observed. If no visible infection of the ovaries is seen, they are invariably retained. The tube is separated and brought into the wound and, if to be retained, is carefully irrigated and distended with strong pressure of the piston from its distal extremity, whether the fluid has passed through the cornu or not.[1] Afterward the mutilated pavilion may be excised, if hopelessly injured during the enucleation.

10. Rosewater: Lancet-Clinic, Feb. 25, 1911.

1. The same syringe and diluted tincture of iodin are used in treating the tube which were used to inject the uterus.

A phimosis operation may be done for the purpose of imitating a fimbriated extremity if the tube is resected. As a matter of routine we leave one tube and ovary whenever possible, and even a portion of either may be advantageously retained.

The application of iodin to the distended uterine cavity is of far more value and efficacy than is the common practice of packing with gauze tapes saturated with an antiseptic, or the use of a return flow catheter. In a large number of instances, especially in infected uteri, it will be possible to project some of the fluid through the cornua into the tubes. Some authorities, as Zweifel, think that in at least one out of four cases this is true. Aulhorn[2] believes that nearly every uterus and fallopian tube is easily reached by injection. He uses argentamin and does not open the abdomen. H. Hoffmann[3] gives a summary of the various methods of conservative treatment of the uterine adnexa, including the methods employed by Fleischmann, Lewith and others, who open the abdomen and practice a technic similar to ours.

REPORT OF TYPICAL CASES

CASE 1.—C. had gonorrheal salpingitis two weeks after infection, also acute appendicitis. There was a diffuse pelvic peritonitis; no attempt at "walling off." Operation consisted in removal of right tube and ovary with the appendix. The remaining tube was irrigated by solution of mercuric chlorid (1:1.000), which was forced through the uterus. The fluid appeared in form of a fine stream from the excised cornu and from the pavilion of the remaining tube in distinct drops. The patient had a narrow escape during the next twenty-four hours, but recovered, and nine years later had a child, and two years later a second child. Both children and mother are well at present.

CASE 2.—Mrs. — had salpingitis and had passed through the acute stage, coming to the hospital about the time the infection was subsiding. Distinct "masses" were located in the region of the ovary and tube on each side, and the diagnosis of double pyosalpinx was established. Tincture of iodin (25 per cent.) was forcibly injected through the slightly dilated cervix and the fallopian tubes. Observing the failure of the fluid to return after removing the nozzle of the syringe, we were not surprised to find at least one ounce of free tincture of iodin in the culdesac when the abdomen was opened. The right tube was still distended and stained with iodin, while the left was stained, but empty. The amount of fluid indicated a rupture of a hydrosalpinx or pyosalpinx on the left side. One-half of the right tube was removed; adhesions were separated; the ovaries brought into better position; the excess of the tincture of iodin sponged away, and the abdomen closed without drainage. The recovery was prompt and uneventful.

Our interns have charge of the hospital dispensary and are constantly on the lookout for results of our method of treatment. As yet, no unusual results have been reported.

Finally, although we have conclusively ascertained that it is possible to reach the tube in a large number of cases by intra-uterine injection, yet we rely on irrigation from the distal extremity in addition to the effort to force the solution through the cornua. Actual tests show that it is not always possible to force fluids through the cornua, but our experiments appear to show that the infected mucosa does not close the cornua and resist the entrance of fluids so successfully as does the normal or uninfected membrane.

2. Aulhorn, E.: Arch. f. Gynäk., 1910, xc, 213.
3. Hoffmann, H.: Mitt. a. d. Hamb. Staatskrankenanst., 1910, xi, 87.

CONDITION OF PATIENTS IMMEDIATELY AFTER OPERATION

I am unable to report any unusual pain, shock or severe reaction following these conservative operations. On the contrary, less pain is observed as a rule when the adnexa are not removed, and in many cases I observe that the only discomfort is due to the incision. In only one instance have I seen a delay in the cure. This case occurred a year ago, and I was unable to explain a continuation of temperature elevation for nearly three weeks. The patient had no pain; there was no unusual induration about the uterus, and she finally recovered fully and has remained well.

PERMANENT RESULTS

Obviously a considerable period of time may be expected to elapse before these patients regain complete health and a perfectly normal or physiologic condition of their pelvic organs. Many cases are reported in the literature showing a number of pregnancies in patients having had some form of conservative operation on their pelvic organs. Our routine use of iodin in the manner now described began soon after we adopted it in skin sterilization, since which time we are not able to report success so far as pregnancy is concerned. The practice of injection of the uterus and tubes by strong pressure has been used from time to time since the date of the first case reported in this paper, but we used solutions of mercuric chlorid, methylene blue, boric acid, etc., instead of iodin, as we do at the present time.

SOME PRACTICAL PSYCHOTHERAPY

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Mental capital or positive suggestion is that renewed courage and hope which the old-time family doctor gave to his patients and which so endeared him to them. His patients said that they "actually felt better the minute he entered the room," and they undoubtedly did.

The wife of a prominent official in a New England city was afflicted with carcinoma of the cervix uteri and after some persuasion submitted to operation. For about one year she remained well, but was then afflicted with metastatic growths in the pelvis and soon became hopelessly cachectic, exhausted and bedridden. Her husband came at last to the family physician and said that he felt that his wife was very near her end, and that he wanted everything tried, no matter how heroic; but above all he wanted her demise as painless and comfortable as possible if no real help could be given her. The physician used the ferments, injections of ascitic fluid from other cancer cases, the *x*-ray and even *Streptococcus erysipelatis* (which, by the way, refused to grow), all to no avail. It was then that the idea of positive suggestion occurred to him. He went to her and told her that the whole previous treatment had been erroneous, that the diagnosis of cancer was a mistake and that now since her trouble was known she would be treated properly and would immediately recover. These ideas were strongly impressed on her mind by this physician, in whom she had every confidence. The result, while it lasted, was little short of marvelous. She began to eat and to take an interest in her surroundings and in two days was riding out in the open air with a nurse. This condition of affairs continued for three weeks at

the end of which time she collapsed and died suddenly. She had been under the influence of analgesic drugs during this time. Now to what was the three weeks' respite due and was this method of giving mental capital justified? Each man must answer this for himself and he who neglects to mollify the sting of death must answer to his own conscience if indeed he has one.

Psychanalysis seeks to look backward into the patient's life for an event or events, sexual or otherwise, which may be at the bottom of a given neurosis, which may have been coincident with the starting of the aberration, or which may have occurred at the parting of the ways of the normal and abnormal.

I believe that there are cases in which these psychic abscesses should not be opened and also that there are others in which "open confession is good for the soul." Each physician must judge his case and diagnose it accurately; if he does not he will sooner or later cast aside a valuable therapeutic instrument as not only worthless but dangerous. In functional, so-called, neurasthenias a world of good may be accomplished by one in whom the patient has faith and confidence. The operator must be a man thoroughly alive to the problems of life, its heartaches, its woes and its vagaries; and above all he must be able to paint its beauties and nobler aspects to the patient in that patient's more suggestible moments. Every one is more approachable and more amenable to suggestion at certain times than at others, and it is at these times that the work must be done. Successful palliative measures may be used in cases of fixed psychoses. I had under my care for one year a Mr. F., a paranoiac of many years' standing. He resided in a small town and was called "queer" by his neighbors. I discovered that he was the possessor of a well-developed system of persecutory ideas regarding a religious sect in his immediate neighborhood. He experienced great joy and relief when he could unload his imaginary troubles on me and have me take them down gravely in a notebook and promise to rectify and correct each and every one of them. He believed so firmly that I would do this that he went successfully about his business for one month at a time, when he would come back with new ideas which I handled as before. Tests showed that he was harmless and would not react to his delusions. He had five children and a wife to support; so considering all details, confinement was hardly to be thought of. This type of case is seldom or never treated in any other way than to try to reason the patient out of these delusions, which of course is useless. Credit must be given to intelligent cooperation on the part of this man's wife, who aided me greatly in my treatment of the case. Her knowledge of the true nature of the trouble made a happy home out of a hitherto somewhat turbulent one. The general condition of this man has steadily improved in the year he has been under treatment, although the delusions are as fixed as ever. He now pays but little attention to them. He has had attacks of auto-intoxication during which he has suffered more from his psychosis. He has learned to avoid constipation and all conditions predisposing to it. I doubt not that the study of internal secretions and hormones will add something to our armamentarium for these cases in the future.

When opportunity offers I intend to carry out some experiments on neurotic and certain insane patients with the *Bacillus bulgaricus*. I have done this in a few cases with apparently good results; but these results could easily have been remissions in the course of the disease and my cases were too few to be of value or to be worth reporting.

Two condemned murderers recently died happy under the influence of Christian Science. Have we all done as much for our own hopeless cases? You may say that this duty properly belongs to the clergy. It does; but there are many whom we and we alone can so stimulate mentally as to render true that saying of a learned physician that "we should leave life as we entered it, painlessly." Just as anoci-association enables one to take an anesthetic fearlessly and easily, so should it in a slightly altered form combined with our own vital forces and suggestions enable our chronic incurables to extract the most out of their last days on earth. Not to death itself belongs terror, but to the fancies attached to it. If the mind be carried away from these fancies to the simple fact itself, death will lose most of its gloom in the eyes of the doomed. This applies in those cases in which, for legal or other reasons, the patient must be informed of the inevitable.

I wish at this point to speak of a common phobia which is common in physically sound and otherwise mentally sound persons—the fear of death. I have found this to be the primary subjective symptom in many neurotic persons and, more to the point at issue, that in most cases they improved when this primary phobia was dispelled by competent argument, religious conversion or systematic attention to the emunctories. Like the fear of ghosts and dark places the morbid fear of death is frequently implanted in the childish mind by unthinking older persons; therefore we ought never depict death and the grave, either to ourselves or to others, especially to children, in more somber colors than in reality belong to either. Gloomy images of this kind serve only to disturb the imagination and exercise a baneful influence over the impressionable mind of the child. These influences are usually permanent, for we well know that many otherwise level-headed adults are somewhat disturbed by stories of the supernatural, and these persons may step from dark cellars at night with more haste than grace. Psychanalysis usually discloses in these cases some specific incident of a startling nature in the developmental period of life. When a person's vitality is lowered by transient illness or business reverses, his old phobia may come to the surface with sufficient force to precipitate an attack of depression from which he never fully recovers. In other words, a permanent mark is left on the brain, and future attacks of depression are more apt to appear and involutional melancholia is apt to occur. Hence the need for prophylaxis in childhood on the part of the child's parents.

An instinctive love of life has been intimately interwoven with our whole being, and this has resulted in a general revolt of our nature against dissolution in all its forms; were it not for this natural shrinking from death, the earth would ere this be a depopulated desert. Man errs grossly when he allows his instinctive love of life to degenerate into a tormenting passion for life, which leads him to entertain an unreasonable fear of death, and to place an exaggerated value on existence on this earth.

In some cases it is a pathologic state of the physical being which causes one to surround death with imaginary shadowy terrors; in others a gloomy temperament—a melancholic diathesis permitted to gain ground untreated—harasses them into a continuous blind dread of dissolution. Not the natural metamorphosis which takes place in death, but the unnatural images of it

which float before the imagination are calculated to awaken terror; man himself has created these for his own torment.

This phobia is in some cases due to nothing more remote than a sedentary existence with too much time for reflection, and is frequently seen in unmarried persons who are too much alone and who have no absorbing hobby. Exercise, work, amusement and congenial companionship will do more here than the best consolatory argument and suggestion.

The dying are as little conscious of the transition from life to death as the weary are aware of the transition from the waking to the sleeping state. Many people have awaited, with full consciousness, the moment of dissolution, and have been aware of it in advance, and yet they fell asleep smiling and without fear. Their imagination had not been previously excited. We have all seen the hippocratic facies and the twitch of the final struggle, yet this change observed by the spectator at the bedside is seen not by the departing one nor is he in any way conscious of it. Illness may be painful, but its cessation never. These thoughts and arguments have been of great service and satisfaction to conscientious medical men who have treated sick persons as well as diseases. The physician should not allow science to tear him away from his Maker, and he should know that the feeling of his older patients, at least, is little short of a love kindred to the parental love, and that in this he has a powerful weapon to aid his patient while there is hope of life and after.

O Grave! where is thy victory?
O Death! where is thy sting?

EPIDEMIC CEREBROSPINAL MENINGITIS

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The report which follows is based on a series of 230 cases treated at the Kansas City General Hospital during the epidemic from Jan. 1 to June 1, 1912. The statistics are compiled from the observations and bedside notes made by the attending physicians and interns of the hospital. I believe the data to be accurate, and the whole report a reliable picture of the epidemic in its clinical features.

TABLE 1.—SUMMARY OF CLINICAL RECORDS MADE IN TWO HUNDRED AND THIRTY CASES OF EPIDEMIC CEREBROSPINAL MENINGITIS

	No. Cases	Per Cent.	Explanatory
Age (in years):			
2 and under	17	7.6	
2 to 10	32	14.3	
10 to 18	34	15.2	
18 to 35	93	41.5	
35 to 50	37	16.5	
Over 50	11	4.9	
No age recorded	6	...	
Sex:			
Male	169	73.5	
Female	61	26.5	
Onset:			
Sudden	169	83.25	
Gradual	13	6.5	
Medium	21	10.25	
Temperature:*			
High	77	33.5	
Moderate	114	50	
Low	43	18.7	
Variable	19	8.3	
Pulse:			
Rapid	85	37	
Slow	126	55	
Variable	21	9	
Mentality:			
Cloudy	60	26	
Delirium	123	53.5	
Unconscious	152	66.1	
Early	129	56.1	
Medium	12	5.2	
Late	11	4.8	
Headache:			
Present	180	84.1	
Doubtful	34	15.9	
Rigid neck:			
Early	179	84	
Developed	27	12.2	
Absent	7	3.3	
Kernig's sign:			
Early	147	77.3	
Developed	26	13.6	
Absent	17	9.1	
Convulsions	48	20.9	In two cases the convulsions were jacksonian.
Early	28	12.2	
Developed	20	8.7	
Vomiting	175	76	
Petechiae	49	21.3	Increased in frequency in latter part of epidemic.
Localizing signs:			
Strabismus	59	25.6	Two-thirds were divergent.
Early	39	....	Frequently transitory.
Developed	20	....	
Deafness	18	7.8	
Early	15	....	
Developed	3	....	
Nystagmus	5	2.2	
Paralysis	7	3	
Early	5	....	
Developed	2	....	
Pupils:			
Unequal	73	31.7	
Dilated	30	13	
Other symptoms:			
Herpes	138	60	On dorsum of hand in two cases; on ear in three cases.
Hyperesthesia	89	39	
Epistaxis	11	4.8	
Photophobia	7	3	
Retention of urine	39	17	
Cheyne-Stokes resp.	44	19	
Leukocytes:†			
Low (under 15,000)	8	15.7	
Medium (15,000 to 25,000).	27	53	
High (over 25,000)	16	31.3	
Spinal fluid:‡			
Cloudy	207	94	
Clear	13	6	Very early cases.
Organisms:			
Many	129	58.6	
Few	77	35	
None on first puncture.	4	1.8	Meningococci found in subsequent punctures.
Absent	5	2.3	
Course:			
Av. No. days duration.	12.8	....	
Recurrences	13	5.6	One case with four recurrences.
Complications:			
Arthritis	18	7.8	Recovery complete in all cases.
Deafness	16	7	Temporary in four; unilateral in one.
Opisthotonos	14	6	
Dysphagia	4	1.7	Due to extreme retraction.
Aphagia	9	3.9	Due to extreme retraction.
Pneumonia	10	4.4	Pneumococci in spinal fluid in two cases.
Hydrocephalus	11	4.8	
Respiratory and cardiac paralysis.	10	4.4	Paralysis of resp. first in nine cases.
Conjunctivitis	7	3	All were purulent.
Cystitis	6	2.6	Majority due to repeated catheterization.
Paraplegia and hemiplegia.	6	2.6	
Epididymitis	4	1.7	Recovery complete in a few days.
Neuritis	4	1.7	
Decubitus	4	1.7	
Iritis	3	1.3	
Insanity	4	1.7	
Delirium tremens	3	1.3	
Bronchitis and laryngitis.	4	1.7	

Also two cases each of hysteria, tympanitis, persistent vomiting and pneumococcic meningitis, and one case each of otitis media, retinitis, cervical adenitis and furunculosis.

* "High" = 102.5 F. and over; "moderate" = 100 to 102.5 F.; "low" = less than 100 F.; "variable" = when frequent and sudden changes in temperature. Some cases are recorded as having "high," "low" and "variable" temperature.

† A count was made in only fifty-one cases. "Low" = below 15,000; "medium" = 15,000 to 25,000; "high" = over 25,000.

‡ "Clear" = clear at first puncture, subsequent fluid being cloudy; "organisms" = meningococci; "none first" = no organisms found in fluid withdrawn at first puncture but demonstrated in subsequent fluids withdrawn; "absent" = in five cases no meningococci were demonstrated, first fluid having been destroyed before examination could be made and subsequent examinations being negative, or patient died before another puncture was made.

It will be noticed that no attempt has been made to treat the etiology or epidemiology in this report. It was impossible to obtain sufficient data at the hospital to draw any definite conclusions. The pathology also has been disregarded, except the statements about the spinal fluid and the blood.

In regard to the statistics given, a few supplementary remarks may be of interest and add to the value of the figures.

The onset of the most prevalent clinical type was as follows: The patient in apparent good health is taken suddenly with a severe chill accompanied by an intense headache which persists and is most frequently frontal. Vomiting occurs during the first twelve hours, but seldom persists after twenty-four hours from the onset. Mental confusion or depression comes on early, often in the first hour, and in some cases is apparently the first symptom—this symptom varies from a slight drowsiness or stupor to extreme delirium or deepest coma. Fever usually follows the chill, but this is by no means constant, for the temperature may be normal or even subnormal for from twenty-four to forty-eight hours. Great variations were noted in the temperature, but in 50 per cent. of the cases it ranged from 100 to 102.5 F. No characteristic fever curve was present. Many sudden drops and sudden rises in temperature without any apparent cause made it impossible to draw definite conclusions regarding temperature. One patient who had been running a temperature of 102 or 103 for two days suddenly showed a drop to 96, the pulse at the same time going from 80 to 56. The temperature and pulse continued at this low mark for eighteen hours, when suddenly the temperature came up to 103 and the pulse to 90. No apparent change was noted in the condition of the patient during this time.

Muscular pains and rigidities are complained of early; the neck muscles and all of the back muscles become rigid and painful. Cramps in the muscles of the legs, especially the calf muscles, were quite commonly among the first symptoms. Rigidity of the neck muscles was practically universal, being absent in only seven cases; but it was not always an early feature: in twenty-seven cases it developed after the patient came to the hospital. The Kernig sign, though present early in over 77 per cent. of the cases, was entirely absent in seventeen cases and developed after the patient was received in twenty-six cases.

The pulse, like the temperature, was a variable feature, but was slow during the early stages in the majority of cases. A rapid pulse from the onset was rarely found. Extremely low pulse-rate was noted in some cases.

Concerning other symptoms there were some interesting features that could not be brought out in the table.

Convulsions occurred much more frequently in children than in adults as an early symptom, and were seen in all degrees of severity, from slight muscular twitchings to severe and generalized convulsive seizures. In two cases they were markedly jacksonian in character, starting in one group of muscles and extending to other groups, the cycle being the same each time the convulsions occurred.

Petechiae were more frequently seen during the latter part of the epidemic than at first, and were more apt to be present in the more severe cases.

Herpes was commonly seen, usually around the mouth and nose but in unusual localities in some cases. Three patients had large crops of herpes on the lobe of the ear, and two on the dorsum of the hand.

The occurrence of a serum rash was not recorded in the chart but was commonly seen, appearing from five to eight days after serum had been used. The rash was an urticaria and often gave rise to symptoms which simulated a reinfection of the meninges, the fever rising after being normal for several days, and severe headache and general malaise being complained of. It usually disappeared in from forty-eight to seventy-two hours.

Typical Cheyne-Stokes respiration occurred in forty-four cases, usually when the patient was nearing the end. Other irregular forms of breathing were also noted. Respiratory failure from which the patient was seldom revived occurred in several cases; the heart continued to beat strongly and rhythmically for some time. In one case artificial respiration was kept up for fifty minutes, the heart beating strongly until within a few minutes of the end. Five patients recovered from respiratory paralysis with the aid of artificial respiration. Cardiac paralysis alone was noticed in two cases.

Retention of urine was an aggravating feature and quite common; thirty-nine patients were thus afflicted, and the necessity of catheterization was probably the cause of the cystitis which developed in several cases. Catheterization was sometimes necessary over a period of several weeks.

The mortality was as follows: total mortality, 52.6 per cent.; not counting patients in the hospital less than twenty-four hours, 46.5 per cent.; eliminating also those aged 50 years and over, and 2 years and under, 41.7 per cent.

TABLE 2.—INFLUENCE OF AGE ON MORTALITY

Age (Years)	Total No. Cases	Fatal Cases	
		No.	Per Cent.
2 and under.....	17	11	64.7
2 to 10.....	32	16	50.0
10 to 18.....	34	12	35.3
18 to 35.....	93	45	48.4
35 to 50.....	35	17	48.6
50 and over.....	13	13	100.0
No age recorded...	6	6	.....

A number of patients died within a few minutes or a few hours after entering the hospital. It would obviously not be a fair judgment of the efficiency of the serum treatment to count these cases. It will also be noted from Table 2 that the extremes of life stood a very slim chance, so I have given the percentage after eliminating these cases.

It should also be stated that on several occasions serum was not available for days at a time, and patients died who might have been saved could they have received the serum in time.

Table 2 illustrates the influence of age on mortality.

Concerning treatment I shall not go into detail. Antimeningococcic serum was used in all cases when serum was to be had. Six patients received no serum and several others only a small amount on account of the scarcity of the serum during the last of March and the first of April. Normal horse-serum was used in a few cases, normal salt solution in others and a weak phenol solution in a few cases during this period. These substitutes seemed to have no influence on the disease. Improvement was seen in some from relief of pressure by withdrawal of spinal fluid, but was only temporary. The patients thus treated either died or had a very protracted course. Aside from the serum the treatment was symptomatic and will not be dwelt on.

The method of administering serum was practically the same in all cases, modified of course by the age and general condition of the patient. An initial dose of from 30 to 45 c.c. was usually given to adult patients as soon as they reached the hospital; a second injection of from 20 to 30 c.c. was given from twelve to eighteen hours later; and subsequently one or two doses of from 20 to 30 c.c. and a dose or two of from 10 to 15 c.c. at intervals of twenty-four hours. The continuance of the serum treatment depended, of course, on whether or not meningococci were still present in the spinal fluid. In favorable cases there was a marked diminution in the number of organisms after the first injection of serum and usually an absence of organisms after the second or third injection; but we noticed that we were much less apt to have a recurrence of infection if one or two injections of serum were made after the spinal fluid showed no organisms present. When symptoms reappeared and organisms again were found in the spinal fluid, the serum was administered again as when the patient first came in. Some patients received serum from time to time over periods of weeks before the infection finally subsided.

Epidemics differ so in their severity that it is not possible to state to what extent the serum treatment influenced the mortality in this epidemic. Nevertheless I am convinced, first, that the course of the disease was materially shortened in those cases that showed any response to treatment; second, that complications and sequelae were much less frequent, and third, that the remarkable results obtained in many cases seen early in the course of the disease were due to the specific action of the serum on the infection.

The statistics here recorded were gathered under the direction of Drs. Franklin E. Murphy, H. D. Hamilton, J. L. Robinson, F. M. Lowe, R. T. Sloan, C. C. Conover and S. P. Child of the attending staff; and I was assisted in accumulating and preparing these data by Drs. H. J. Schott, F. W. Aves, F. R. Teachenor, B. W. Turner, R. W. Spicer, E. V. Eyman, Rushton, R. C. Davis, Heatley and R. M. Mendelsohn of the house staff.

THE DISAPPEARANCE OF SUGAR AFTER THE REMOVAL OF TUMORS IN DIABETICS

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In the discussion of Joslin's paper,[1] Miller called attention to a fact which is of great importance in the prognosis of diabetic patients who may require operations for the removal of tumors, and which may also have some value in the solution of the much-debated problems of the etiology of diabetes. I refer to the disappearance of sugar after the removal of tumors.

Miller's case is as follows:

A woman passed 50 gm. of sugar in spite of being on a rigid diet. She had very severe uterine hemorrhages, and as a result was markedly anemic. A hysterectomy was performed. It was found that a carcinoma had developed on an old fibroid tumor. Several months later the patient returned, and it was found that she was entirely free from sugar. She is still well, in spite of taking an unlimited diet.

In closing the discussion Joslin reported a similar case. The patient had a severe attack of diabetes; the glycosuria occurred in connection with a fibroid tumor of the uterus. When the fibroid was removed the sugar disappeared.

I wish to report two similar cases from my own practice, in both of which the patients were severe diabetics with advanced prostatic disease.

In the first case, which occurred ten years ago, the patient was a man of 62 years with a long-standing diabetes with prostatic bladder symptoms of several years' duration. On account of his severe diabetes—the daily amount of sugar ranging from 50 to 150 gm., and a marked acidosis being present—he was considered a bad surgical risk, the more so as he had a very vulnerable skin. Finally the condition of urinary sepsis became so urgent that the drainage of the bladder and the removal of the prostate gland could no longer be delayed. The operation was performed in two stages by Dr. Lilienthal, and to every one's surprise was very well borne. Great relief was afforded to the patient, but what was especially gratifying was the marked improvement in the diabetes. For a long time the sugar excretion remained below 20 gm. and the acidosis disappeared. This was all the more remarkable as the patient had a bad family history of diabetes, and all attempts to render his sugar less had not been successful to any marked extent. About a year and a half after the prostatectomy the diabetes again took on a severe form and he finally succumbed to it.

The second case first came under observation five years ago. The patient was a man, who was then 70 years old and who had been under the care of Dr. Chetwood for a long-standing prostatic disease and diabetes. For a long time the sugar ranged between 3 and 5 per cent. in spite of dieting, and there was a marked acidosis. This patient too was considered a bad surgical risk on account of his age and the diabetes. In his case also the development of a bad urinary sepsis left no choice. The removal of the prostate and several large stones was a difficult operation, and in spite of all precautions the convalescence was protracted. Nevertheless the patient made a complete recovery, and he never had any further trouble from his bladder. After the operation the sugar disappeared completely, and it never returned in spite of the most liberal diet. The sugar did not reappear even when he developed a pus kidney from which he died a few weeks ago after a short illness, as he refused to be operated on.

The results in these two cases offer a striking corroboration of the experience of Miller and Joslin; they seem to represent more than a coincidence, since in all the cases, four in number, the diabetes was a severe one with marked acidosis. In three of them the removal of a tumor was followed by a complete disappearance of the glycosuria, while in the fourth case there was a marked improvement for a year and a half, a result which was all the more remarkable since all efforts on my part to reduce the sugar had been unsuccessful for a long time, as the patient was an exceedingly neurotic man with a bad diabetic family history, and the suffering from his bladder and prostate had been most intense.

That diabetes can be cured even without dietetic treatment is a well-known fact even though such cases are quite uncommon. Naunyn, in his masterly treatise,[2] discusses this possibility, and shows its infrequency. It is most likely to occur when the diabetes has followed a cerebral trauma or in syphilitic diabetes. He also refers to cases of cured diabetes in which a curable organic disease cannot be diagnosticated, these cases being usually acute diabetes. He also notes the curious fact that a large proportion of the latter cases occur among children, who as a rule run such a severe and fatal course. He also warns against considering as cures the not infrequent cases of diabetes in old persons in whom the process simply becomes latent for a longer or shorter period. His conclusion is that "taken all in

1. Joslin, Elliott P.: My Experience with Diabetic Patients Living Ten or More Years, THE JOURNAL A. M. A., Sept. 21, 1912, part 1, p. 933.

2. Naunyn: Der Diabetes mellitus, 1898, p. 351.

all, cures of diabetes are very rare, and not known to have occurred after the disease has lasted any length of time. It is only among the cases of traumatic diabetes in which a few cures occur, where the condition has not lasted more than three months."

Von Noorden[3] also refers to the marked improvement or cure of diabetes in cases which develop chronic granular nephritis; these cases are usually associated with marked hypertension and cardiac hypertrophy. In these patients von Noorden has found that the blood is richer in epinephrin. It is to the latter that he attributes the improvement in the diabetes, for the epinephrin stimulates the liver and causes the pancreas to be overactive, and also possibly produces hypertrophy of the still intact islands of Langerhans. In such cases there may be a marked hyperglycemia without glycosuria. Von Noorden, however, confesses that these are merely theoretical considerations which still require confirmation. The fact, however, remains, which all clinicians know, that the development of a chronic nephritis is often associated with the complete and permanent disappearance of sugar.

None of these considerations, however, explains the cases under discussion, in which the disappearance of the sugar is sudden and complete after the removal of tumors which apparently have no etiologic relation in the causation of the diabetes. Curiously enough, in all four cases these tumors were situated in the genital sphere—two prostate glands and two uterine fibromas. In both of the prostatic cases which were under my observation the diabetes existed long before the prostatic disease appeared. I know nothing of the duration of the uterine fibromas, since neither Miller nor Joslin gives data on this point. Neither do these two authors refer to any renal disease in their cases; as no reference to this possibility is made, it is fair to assume that it did not exist. Renal disease certainly played no rôle in either of my prostatic cases, since the nephritis which was present in both cases was of the common type which is so often seen in elderly persons. In neither was there any hypertension, which von Noorden postulates for the cure of diabetes by the development of nephritis.

Whether there was any hyperglycemia in these four cases, as suggested by von Noorden, was unfortunately not noted in any of the cases. It is improbable that it existed, for in three of the patients even the most liberal diets failed to produce any glycosuria. This is most strikingly shown in the second of my cases, the patient remaining absolutely sugar-free for five years in spite of full diets of every kind. Even when he developed high fever and suppuration the sugar did not appear at any time, and he died sugar-free.

In the present state of our knowledge of the etiology of diabetes it is idle to speculate as to the explanation of the disappearance of sugar after the removal of tumors, as the cases which have thus far been reported are far too few to permit the drawing of any conclusions. The most plausible possibility is that the operation removes some nervous or toxic irritant which in some way, at present unknown, disturbed the carbohydrate metabolism.

Of far more importance than these etiologic speculations are the practical conclusions to be drawn from these four cases regarding the prognosis of operations on severe diabetics. These patients have always been a dread touch-me-not for the surgeon, with the result that many a patient has been allowed to die unoperated on. The outcome in these four cases would show that the prognosis from the operative point of view is far better than is generally believed; it should also make us bolder than we have hitherto been in advising operation on diabetics with tumors. We may even go further in hoping that operation may even have beneficial effects on the diabetes itself, if the excellent results in these four cases are confirmed by other observers.

In general, it may be said that the general practitioner and the surgeon have too much fear of acidosis; they have not yet learned to differentiate the cases in which acidosis is a menacing symptom. When diacetic acid or oxybutyric acid tests are negative there is no danger, no matter how intense the acetone reactions may be. When, however, diacetic or oxybutyric acid reactions are present, the prognosis should be more guarded. In such cases the physiologic chemist can give definite information as to whether coma is impending or not, by the determination of the relations of the ammonia nitrogen to the total nitrogen excretion of the urine. When this quotient is low and within the normal limits, the immediate prognosis is a good one, and the danger from grave acidosis or coma after operation is not great enough to prevent the performance of any operation which may be necessary.

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3. Von Noorden: New Aspects of Diabetes, 1912, p. 51.

BURNAM'S TEST FOR FORMALDEHYD IN THE URINE

A STUDY OF TWO HUNDRED CASES

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Dr. L'Esperance of Boston published an article recently on the excretion of formaldehyd in the urine of patients taking hexamethylenamin (urotropin), giving details of Burnam's test and the results of some experiments made at the genito-urinary department of the Massachusetts General Hospital.[1]

Having developed an interest in the test after reading the article, and having available men on whom tests could be made, I used the test on 200 men, and for the purpose of experiment divided the cases into two groups of 100 men each, varying the dosage and time of administration of hexamethylenamin in each group.

The results of these tests are so interesting, and so different in many respects from those of Dr. L'Esperance, that it seems advisable to publish the facts and conclusions in connection with the tests.

Burnam's test consists of a color reaction in the urine of persons who have taken hexamethylenamin, and is reported to be a simple and accurate test for the presence of formaldehyd. In the L'Esperance article the technic is described as follows:

> To about 10 c.c. of suspected urine in a test-tube at body temperature is added:
>
> 1. Of solution phenylhydrazin and hydrochloric acid 0.5 per cent., 3 drops.
> 2. Of solution sodium nitroprussid 5 per cent., 3 drops.
> 3. Of saturated solution sodium hydrate, a few drops poured along the side of the test-tube.
>
> As this latter solution diffuses throughout the urine in the tube, if formaldehyd is present (or the urine is positive), a

1. L'Esperance, O. R. T.: Excretion of Formaldehyd by the Kidneys of Patients Taking Hexamethylenamin; A Study of Burnam's Test, Boston Med. and Surg. Jour., Oct. 24, 1912, p. 577.

deep purplish-black color is seen quickly changing to dark green, gradually getting of a lighter shade of the same color, to, finally, pale yellow.

With a urine that does not contain formaldehyd (or is negative) the color reaction is as follows: As the saturated solution of sodium hydrate diffuses through the urine in the tube, a reddish color is seen gradually turning to light yellow. . .

The time of the appearance of the drug in the urine is about one hour after ingestion by the mouth; the earliest was thirty minutes, and the average was at about the end of one hour. The continuation of the excretion extended for from four and one-half to six hours, with maximum at about two hours.

In my experiments I followed the technic given above, and, in order to eliminate any inconsistency possible when two or more persons are observing the same color phenomena, the 200 tests were made by the same assistant. The tests were all made on men who were not under treatment for genito-urinary disease, and who had not previously received hexamethylenamin. The urines were examined by daylight in a well-lighted laboratory.

The first group of men (100) were given 10 grains of hexamethylenamin at 6 p. m. and a second dose at 6:30 a. m. the following morning. The urines were examined at the end of five hours.

The second group of men (100) were given 20 grains of hexamethylenamin at 6:30 a. m. and the urines were examined at the end of two hours.

The reaction in every case took place immediately but the colors produced, both in the positive and the negative urines, varied slightly from those reported by L'Esperance, and, while it is believed that the average practitioner would have little difficulty in recognizing the reaction, my experience with 200 tests convinces me that the "deep purplish-black" spoken of as the first change in a positive urine is not constant, and that departure from this color rule is not infrequent. In many of the tests the color was not deep purplish-black but purple, changing to a green (not dark green) and finally to pale yellow.

A rather constant diagnostic point in the positive urines was the striking rapidity of the color formation and its peculiar method of diffusion through the upper strata of the fluid. Immediately on the addition of the sodium hydrate solution the purple color appeared in flashes or jets, as it were, down through the column of liquid in the test-tube, forming irregular lines and figures of purple, then blending and coloring the entire liquid, the diffusion of color occurring in the lower strata first. Following this spectacular display of color figures and diffusion came the green hue which remained for some minutes.

In the negative urines the test was found to agree with those performed at the Massachusetts General Hospital with the exception that the end reaction was considered to be a display of greenish-yellow rather than light yellow.

Of the first group of 100 men 42 per cent. of the urines were positive. All but two of the urines in this group gave an acid reaction; those two were alkaline.

Of the second group of 100 men 53 per cent. of the urines were positive. In this group two urines were alkaline and one neutral. The rest were acid.

A total percentage of 47.5 was the result of the 200 tests, or about 5 per cent. less than was found in the L'Esperance tests.

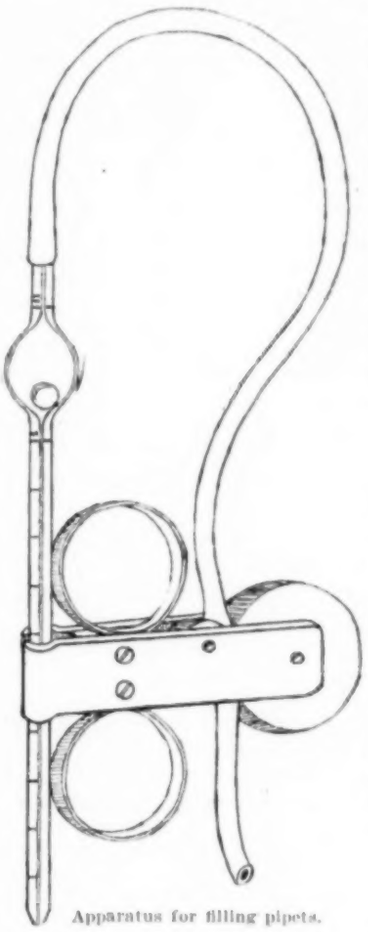
No symptoms were reported from men taking the hexamethylenamin.

72 East Seventy-Ninth Street.

A NEW APPARATUS FOR FILLING PIPETS

ROBERT D. MADDOX, M.D., CINCINNATI

There is a demand for a more simple and efficient method of filling pipets, especially those used in blood work, where accuracy of dilution is essential. Several recent instruments have not been satisfactory, chiefly because the production of the vacuum necessary to raise the fluid in the capillary tube depends on some form of piston or other sliding mechanism, which either complicates the apparatus or does not permit of sufficiently delicate use. To overcome these objections I have made an apparatus that is simple, inexpensive and highly efficient, as with ordinarily careful manipulation it will give accurate results. In this apparatus a well-established principle is used: a vacuum is produced by the compression of a rubber tube or hose, one end of which is attached to the pipet, between two movable rollers, so that the tubing may be moved in either direction between the rollers as they are revolved, just as clothes pass through an ordinary wringer. When the rollers are turned so as to increase the length of the tubing between the rollers and the pipet, a vacuum is produced in the tubing and the fluid is drawn into the pipet, slowly or rapidly, depending on the speed with which the rollers are turned. When the direction of the rollers is reversed and the amount of tubing between the rollers and the pipet is decreased, a pressure is produced and the contents of the pipet are expelled. A piece of metal is bent to form a rectangle about 2 inches long, ¼ inch wide and ½ inch deep, making a frame in which are mounted midway two rollers, 5/16 inch in length by ½ inch in diameter, the space between the rollers being about 1/16 inch.



Apparatus for filling pipets.

In the first form that was made the spindle of one of the rollers was carried beyond the side of the frame for 1 inch, and a 1-inch manipulating wheel attached to the end.

In the second form (see illustration), the size of the outer roller was increased to 1 inch, the roller placed so as to project beyond the edge of the frame, and its surface slightly roughened so that it could be moved by the thumb and thus serve as a manipulating wheel. In both forms the end of the frame is shaped so as to form a spring-clip to hold the pipet, an exceedingly useful feature, as the instrument and pipet may be held and manipulated with one hand, thus leaving the other hand free. Finger-rings attached above and below the frame between the roller and the pipet serve to facilitate this use. About 8 inches of 3 mm. rubber tubing is the convenient amount to use on blood pipets, but to pass about 3 inches of tubing between the rollers will draw the blood up to the first mark, and fill the mixing chamber at the top of the pipet with the diluting fluid up to the second mark.

4 West Seventh Avenue.

AN ARGYLL ROBERTSON PUPIL BECOMING NORMAL AFTER MERCURY AND SALVARSAN

J. J. ZAUN, M.D., ST. PAUL, MINN.

H. W., aged 32, married eight years, whose child, aged 3, and wife show no evidence of syphilitic lesions, had gonorrhea years ago, but does not know of ever having had a chancre or initial lesion.

I saw him July 30, 1912. He consulted his physician then on account of difficulty in walking and cramps in the calves of his legs. Examination at that time revealed complete loss of patellar reflexes; Argyll Robertson pupil in both eyes (no reaction to light); cramps in the calves; gastric and intestinal crises; marked Romberg sign; testicular reflex increased so that stroking the skin on the inside of thigh caused the testicle to be drawn up into the canal; muscle sense disturbed; gait markedly affected; Wassermann reaction positive.

The treatment consisted of mercurial inunctions and potassium iodid until August 20. He was then given 0.6 gm. of salvarsan in the right gluteal region. A marked induration at the site of the injection has persisted up to the present (December 20). November 4 he was given an intragluteal injection of salvarsan, 0.7 gm., on the left side. This was followed by an induration which remains now, but is not so marked as that following the first injection.

December 9: Examination shows: patellar reflex unchanged; Argyll Robertson pupil gone (both eyes show an immediate response to light). The same condition exists now (December 20). The Romberg sign is not nearly so marked as before treatment. While formerly the patient had to steady himself, especially in washing his face, he now experiences very little difficulty, and the gait is much improved. There has been a gain in weight of 5 pounds. He feels better than he has in years and is surer of his movements.

The restoration of the pupillary reflex I take as justification for reporting in detail a case of tabes dorsalis, as this is the first time I have seen or read of this happening after the administration of mercury or salvarsan.

912 Laurel Avenue.

SPORADIC CEREBROSPINAL MENINGITIS; RECOVERY

GEORGE R. GREEN, M.D., MUNCIE, IND.

Nov. 3, 1912, I saw in consultation with Dr. F. E. Hill of this city Paul W., aged 12. The patient was comatose and had a high temperature; the neck and back muscles were stiff, and Kernig's sign was well marked. The pupils were dilated and the eyes staring. Fearing cerebrospinal meningitis I made a spinal puncture within an hour and withdrew 50 c.c. of milky spinal fluid, and, without withdrawing the exploring needle, I injected into the canal 30 c.c. of Flexner's serum.

As soon as my son, Dr. E. S. Green, could reach our laboratory he made a careful microscopic examination and found the fluid loaded with the *Diplococcus intracellularis meningitidis*.

In twenty-four hours I made a second puncture and again allowed 50 c.c. of spinal fluid to flow out and again injected 30 c.c. of Flexner's serum. Again Dr. E. S. Green made careful slides and found that the diplococcus had partially disappeared and we could see macroscopically that the spleen fluid was not so thick or cloudy, and that leukocytes were very numerous. The muscular contractions were not so firm, and the boy, while still unconscious, was easier to handle and would voluntarily change his position, which he could not do before on account of opisthotonos.

Thirty-six hours later I made the third and last puncture, again withdrawing 50 c.c. of fluid and injecting 30 c.c. of serum, making in all 90 c.c. of serum. On this occasion the boy was held for thirty minutes by his father in an incline of 45 degrees head downward, in order that he might receive some benefit from gravity.

At the third puncture the spinal fluid was clear and seemed normal both to the eye and under the microscope. On this day the boy had two severe convulsions and on the next morning awoke, asked for food, inquired what was the matter, and promptly recovered.

I believe this case valuable because every step was verified by the microscope, and the rapidity of the disappearance of the meningococcus was carefully noted. The series of slides (three of each puncture) was preserved.

126 West Jackson Street.

THE EMETIN TREATMENT OF AMEBIC DYSENTERY

WILLIAM ALLAN, M.D., CHARLOTTE, N. C.

For a number of years English[1] physicians working in India have maintained that ipecac is the best remedy for amebic dysentery, and within the past few years the American profession has largely come to agree with them.[2] In March, 1911, Vedder,[3] working in Manila, published his findings that a fluid extract of ipecac would kill amebas in cultures in dilutions as high as 1:200,000. The next year Rogers[4] in Calcutta found that emetin hydrochlorid killed amebas in stools in dilutions of 1:100,000 and began the use of this salt hypodermically in cases of amebic dysentery. His brilliant results led me to try this therapy, and as I have seen so far no confirmation of his work, I submit the following cases:

CASE 1.—White man, aged 51, farmer, contracted amebic dysentery in Alabama in October, 1912. I saw the case in consultation with Dr. L. W. Hunter, Dec. 20, 1912. At that time the man was in bed, having about six stools daily, with mucus and tenesmus, but no gross blood. There was irregular evening fever, at times reaching 103. Blood examination: hemoglobin 65 per cent., white count 6,000; differential count showed polynuclears 73 per cent., large mononuclears 5 per cent., small mononuclears 16 per cent., eosinophils 6 per cent. Feces were liquid, containing mucus, considerable blood microscopically, and many amebas engorged with red blood-cells. Physical examination showed considerable tenderness over the colon from the cecum to the splenic flexure.

December 21: Admitted to the hospital and given 0.8 grain of emetin hydrochlorid hypodermically. Patient had four stools before admission.

December 22: No nausea from emetin; two stools since yesterday; examination of a fresh stool failed to show amebas; blood and mucus still present; patient given 1.4 grains of emetin.

December 23: Slight nausea last night; two stools, without either blood or amebas; mucus still present; patient given emetin, 1.4 grains.

December 24: One normal stool to-day, the first in five weeks; no blood, mucus, or amebas; no tenesmus; tenderness over the colon improving rapidly; temperature subnormal since the first dose of emetin. The patient was dismissed, December 30, apparently well.

CASE 2.—Male negro, aged 22, referred to me Sept. 7, 1912, by Dr. J. Q. Myers, contracted dysentery in the spring of 1910. He improved the following winter, but in the summer of 1911 had dysentery off and on, and had it steadily during the summer of 1912, with as many as thirteen bloody, mucous, painful stools a day. Hemoglobin 80 per cent.; differential count showed polynuclears 74 per cent., small mononuclears 15 per cent., large mononuclears 3 per cent., eosinophils 8 per cent. Feces showed blood, mucus and amebas containing red blood-cells. Physical examination was negative except for tenderness over descending colon, which was thickened. Patient was given 50-grain doses of ipecac by mouth and delayed vomiting and purging resulted, but the amebas remained. After several weeks another course of salol-coated ipecac pills was instituted, but the amebas did not disappear.

November 2: Given 0.6 grain emetin hydrobromid hypodermically, and after three days the dose had been increased to 1.3 grains. The salt was dissolved in 3 c.c. of water per grain.

1. Manson, Sir P.: Tropical Diseases, William Wood & Co. Rogers, L.: Fevers in the Tropics, Oxford Medical Publications.
2. Brem, W. V.: Am. Jour. Med. Sc., 1910, cxl, 669. Simon, S. K.: New Orleans Med. and Surg. Jour., 1912, lxv, No. 5, etc.
3. Vedder, E. B.: Bull. Manila Med. Soc., March, 1911.
4. Rogers, L.: Brit. Med. Jour., June 22 and Aug. 24, 1912; Therap. Gaz., 1912, xxxvi, 837.

but caused great pain at the site of injection and apparently was not absorbed. The dysentery with amebas continued as before. Dr. F. W. L. Tydeman made an analysis of the emetin hydrobromid and failed to confirm its presence in the preparation. This was then discontinued.

December 17: Since the last note, patient has taken ipecac pills again, but without effect. Patient given 0.8 grain emetin hydrochlorid (Merck) (5 per cent. solution in normal salt) hypodermically.

December 18: Blood, mucus and amebas still present.

December 19: Emetin hydrochlorid, 1.5 grains, administered hypodermically.

December 21: No effect; 1.6 grains given hypodermically. This salt is evidently absorbed but has caused so far no nausea or vomiting.

December 23: Amebas still plentiful; 2 grains of emetin given hypodermically.

December 27: Amebas still present. As this dose had caused no symptoms I determined to increase the dose until vomiting occurred.

December 30: Patient admitted to the hospital and given 2.4 grains of emetin hydrochlorid.

December 31: No symptoms from yesterday's medication, and blood, mucus and amebas still plentiful. Patient given hypodermically 4 grains of emetin hydrochlorid at 12:30 p. m. This caused nausea for several hours in the afternoon with vomiting once at 5 o'clock.

January 1: No blood and no mucus in the stools to-day, for the first time since last spring. No amebas on microscopic examination.

January 2: Stools formed, no blood, mucus or amebas. The aching over the sacrum has disappeared.

January 4: Patient dismissed as apparently well. No blood, mucus, pain or amebas since the last dose of emetin, December 31.

New and Nonofficial Remedies

THE FOLLOWING ADDITIONAL ARTICLES HAVE BEEN ACCEPTED BY THE COUNCIL ON PHARMACY AND CHEMISTRY OF THE AMERICAN MEDICAL ASSOCIATION. THEIR ACCEPTANCE HAS BEEN BASED LARGELY ON EVIDENCE SUPPLIED BY THE MANUFACTURER OR HIS AGENT AND IN PART ON INVESTIGATION MADE BY OR UNDER THE DIRECTION OF THE COUNCIL. CRITICISMS AND CORRECTIONS ARE ASKED FOR TO AID IN THE REVISION OF THE MATTER BEFORE PUBLICATION IN THE BOOK "NEW AND NONOFFICIAL REMEDIES."

THE COUNCIL DESIRES PHYSICIANS TO UNDERSTAND THAT THE ACCEPTANCE OF AN ARTICLE DOES NOT NECESSARILY MEAN A RECOMMENDATION, BUT THAT, SO FAR AS KNOWN, IT COMPLIES WITH THE RULES ADOPTED BY THE COUNCIL.

W. A. PUCKNER, SECRETARY.

MENINGOCOCCUS VACCINE.—(See N. N. R., 1913, p. 223.)

G. H. Sherman, Detroit.

Meningococcus Vaccine.—Each Cc. contains about 1,000 million killed meningococci.

STAPHYLOCOCCUS VACCINE.—(See N. N. R., 1913, p. 225.)

G. H. Sherman, Detroit.

Staphylococcus Pyogenes Aureus Vaccine.—Marketed in two strengths: 1. Containing in each Cc. about 300 million *Staphylococcus pyogenes aureus.* 2. Containing in each Cc. about 600 million *Staphylococcus pyogenes aureus.*

Staphylococcus Pyogenes Albus and Aureus Vaccine.—A mixed vaccine containing in one Cc. *Staphylococcus pyogenes albus* and *aureus* each 600 million.

PNEUMOCOCCUS VACCINE.—(See N. N. R., 1913, p. 224.)

G. H. Sherman, Detroit.

Pneumococcus Vaccine.—Marketed in two forms: 1. Each Cc. contains about 40 million killed pneumococci. 2. Each Cc. contains about 100 million killed pneumococci.

Therapeutics

DISTURBANCES OF THE HEART

(Continued from page 595)

AURICULAR FIBRILLATION

While auricular fibrillation is a clinical entity, it is often difficult of diagnosis, and sometimes can be excluded only by treatment and the results of treatment, or by watching the patient for some time. When completely present, it consists really of a paralysis of the auricles; normal systolic contractions of the auricles do not occur, although there are little rapid twitchings of different muscle fibers of the auricles, which give the name to the condition.

In 1902 Dr. James Mackenzie of England discovered that in these irregular hearts the auricular wave in the jugular tracings did not occur, and assumed that the auricle was more or less paralyzed. In 1908 he concluded that from a stimulus, perhaps occurring in the auriculoventricular node, both auricles and ventricles contracted synchronously, and to these he gave the term of "nodal rhythm." But in 1909 Lewis[1] determined by experimentation that when fibrillations were caused in the dog the tracings were perfectly similar to those observed by Mackenzie, although Cushny and Edmonds, in 1906, had already suggested this similarity. It is now known that there is no nodal rhythm in auricular fibrillation, and that the ventricle fortunately generally responds to only a certain number of the auricular stimuli. The auricle loses coordinate activity but is probably not paralyzed.

The irregular pulse in auricular fibrillation is more or less distinctive, being generally rapid, from 110 upward. Occasionally the pulse-rate may be much slower, if the heart is under the influence of digitalis. The irregularity of the pulse in this condition is excessive; the rate, strength and apparent intermittency during a half minute may not at all represent the condition in the next half minute, or in the next several minutes. It has been thought that auricular fibrillation, while prevented many times by digitalis, is perhaps incurable. This is probaly not true in the early stages of the condition. If digitalis does not cure the irregularity, the condition has been termed the "absolutely irregular heart." Other terms applied to the condition have been "ventricular rhythm," "nodal rhythm" and "rhythm of auricular paralysis." The condition of the pulse has been Latinized as *pulsus irregularis perpetuus.*

While the condition is best diagnosed by tracings taken simultaneously of the heart, jugular and radial, still the jugular tracing is almost conclusive in the absence of the auricular systolic wave. The radial tracing is exceedingly suggestive, and if it is taken with a careful stethoscoping of the heart, an almost certain presumptive diagnosis may be made.

This condition of auricular fibrillation occurs occasionally in valvular disease, and perhaps most frequently in mitral stenosis; but it can occur without valvular lesions, and with any valvular lesion. If it occurs in younger patients, valvular disease is likely to be a cause; if in older patients, sclerosis or myocardial degeneration is generally present.

It may also follow depressing infections such as diphtheria, or some infection that has caused a myocarditis.

1. Lewis, Thomas A.: Heart, i, 311; also Brit. Med. Jour., Jan. 13, 1912.

Rarely this fibrillation may be caused by some of the drugs used to stimulate the heart.

It is astonishing how few symptoms may be present with auricular fibrillation and an absolutely irregular heart action. The patient may be able to perform all of his duties, however strenuous, until coincident, concomitant or causative ventricular weakening and dilatation or broken compensation occurs, and then the symptoms are those due to the cardiac failure. Often in the first stage of this weakening and later fibrillation of the auricles the patient may recognize the cardiac irregularity and disturbances. Generally, however, he soon becomes accustomed to the sensations, and, unless he has cardiac pains or dyspnea, he becomes oblivious to the irregularity. At other times he may be conscious of irregular, strong throbs or pulsations of the heart, as such hearts often give an occasional extra sturdy ventricular contraction. These he notes. Real attacks of tachycardia may be superimposed on the condition. Sooner or later, however, if the condition is not stopped, cardiac weakness and loss of compensation, with all the usual symptoms, occur. It seems to be probable that more than half of all cases of heart failure are due to auricular fibrillation, or at least are aggravated by it.

The condition may be stopped by relieving the heart and circulation of all possible toxins and irritants, and by the administration of digitalis. One attack is frequently followed by others, perhaps of longer duration. Occasionally, however, the patient may be observed for many years without the condition again being present. If the pulse, in spite of treatment, is permanently irregular, and auricular insufficiency is permanent, the patient is of course in danger of cardiac failure; but still he may live for years and die of some other cause than heart failure. The prognosis seems to be better when the pulse is not rapid—below a hundred. This shows that the ventricles are not much excited and do not tend to wear themselves out.

Any treatment that lowers the heart-rate is of advantage, such as the stopping of tea and coffee, the administration of digitalis, and an increased amount of rest and quiet. Digitalis should be increased gradually until a fair dose is given, and it is better to administer one dose a day than several. If it causes undesired symptoms, such as cardiac pain, a tight feeling in the chest, nausea or vomiting, or a diminished amount of urine, it is not acting well and should be stopped. If the pulse is gradually slowed to about what is normal, its action should be considered successful.

If the pulse is intermittent and there is apparently a heart-block, Stokes-Adams disease should be considered as possibly present, and digitalis would be contra-indicated and would do harm.

A scientific indication as to whether a heart is disturbed through the action of the vagi nerves or whether the disturbance is due to muscle degeneration may be obtained by the administration of atropin. Talley[2] of Philadelphia shows the diagnostic value of this drug. It is a familiar physiologic fact that stimulation of the vagi slows the heart or even stops it. Stimulation of these nerves by the electric current, however, does not destroy the irritability of the heart; indeed, the heart may act by local stimulation after it has been stopped by pneumogastric stimulation. It is also a well-known fact that anything that inhibits or removes vagus control of the heart allows the heart to become more rapid, since these nerves act as a governor to the heart's contractions. Under the influence of atropin the heart-rate is increased by paralysis of the vagi. Talley states that a hypodermic injection of from 1/50 to 1/25 grain of atropin produces the same paralytic and rapid heart effect in man. He advises the use of 1/25 grain of atropin in robust males, and 1/50 grain in females and in less robust males, and he has seen no serious trouble occur from such injections. The throat is of course dry, and the eyesight interfered with for a day or more, but Talley has not seen even insomnia occur, to say nothing of nervous excitation or delirium. Theoretically, however, before such atropin dosage, an idiosyncrasy against belladonna should be determined.

The value of such an injection rests on the fact that atropin thus injected will increase the normal heart from thirty to forty beats a minute, and Talley believes that if the heart-beat is increased only twenty or less, if the patient has not been suffering from an exhausting disease, it shows "a degenerative process in the cardiac tissue which makes the outlook for improvement under treatment unpromising." He also believes that when the heart in auricular fibrillation is increased the normal amount or more than normal, the prognosis is good. He still further advises in auricular fibrillation an injection of atropin before digitalis has been administered, and another after digitalis is thoroughly acting. Comparison of the findings after these two injections will determine which factor, vagal or cardiac tissue, is the greater in the condition present. The patients with a large cardiac factor are the ones who may be more improved by the digitalis treatment than those in whom the fibrillation is caused by vagus disturbance.

2. Talley, James: Am. Jour. Med. Sc., October, 1912.

BRADYCARDIA

The first decision to be made is what constitutes a slow pulse or slow heart. A pulse below 58 or 60 beats per minute should be considered slow, and anything below 50 should be considered abnormally slow and a condition of more or less suspicion. A pulse from 45 to 50 per minute occasionally occurs when no pathologic excuse can be found, but such a slow rate is unusual. Before determining that the heart is slow, it must of course be carefully examined to determine if there are beats which are not transmitted to the wrist; also whether a slow radial rate is not due to intermittency or a heart-block. Auricular fibrillation, while generally causing a rapid pulse (though by no means all beats are transmitted to the peripheral arteries), may cause a slow pulse because some of the contractions of the heart are not transmitted.

While any pulse-rate below 50 should be considered abnormal and more or less pathologic, still a pulse-rate no lower than 60 may be very abnormal for the individual. For athletes and those who work hard physically a slow pulse is normal. Such hearts are often not even normally stimulated by high fever, so that the pulse is unusually slow considering the patient's temperature, unless inflammation of the heart has occurred.

Some chronic diseases cause a slow pulse; this is especially true of chronic interstitial nephritis. In fact, it may be stated that any disease or condition that increases the blood-pressure generally slows the pulse, unless the heart itself is affected. This is true of hypertension, of arteriosclerosis, of nicotin unless the heart has become injured, and often of caffein, unless it acts in the individual as a nervous stimulant. Chronic lead-poisoning causes a slow pulse on account of the increased blood-pressure.

A slow pulse may occur during convalescence from acute infections such as typhoid fever and pneumonia, and sometimes after septic processes. While it may not be serious in these conditions, it should always be carefully watched, as it may show a serious myocarditis.

While weakness generally and myocarditis, at least on exertion or nervous excitation or after eating, cause a heart to be rapid, still such a heart may act sluggishly when the patient is at rest, so that he feels faint and weak and disinclined to attempt even the slightest exertion. In such a condition calcium, iron and strychnin, not too frequently or in too large doses, and perhaps caffein, are indicated. Camphor is always a valuable stimulant, more or less frequently administered, during such a period of slow heart. This slow heart sometimes occurs after rheumatic fever; it is quite frequent after diphtheria, and may show a disturbance of the vagi.

Although the prognosis of such slow hearts after serious illness is generally good, a heart that is too rapid after illness is often more readily brought to normal by proper management than a heart that is too slow. Either condition needs proper treatment and proper management.

It is well recognized that serious, almost major hysteria may be present and the heart not only not be increased, but it may even be slowed. The heart in this condition of course requires no treatment. In cerebral disturbances, especially when there is cerebral pressure, and more particularly if there is pressure in the fourth ventricle, the pulse may be much slowed. It is often slowed in connection with Cheyne-Stokes respiration. It may be very slow after apoplexy, and when there are brain tumors. It is often much slowed in narcotic poisoning, especially in opium, chloral and bromid poisoning. Serious toxemia from alcohol may cause a heart to be very slow. It is more likely, however, to cause a heart to be rapid, unless there is actual coma.

A frequent condition causing a slowing of the heart is the presence of bile in the blood, typically true of catarrhal jaundice. Uremic poisoning and acidemia and coma of diabetes may cause a pulse to be very slow.

Not infrequently after parturition the heart quiets down from its exertion to a rate below normal. If the urine is known to be free from albumin and casts and there are no signs of impending eclampsia, the slow pulse is indicative of no serious trouble; but the urine should be carefully examined and a possible uremia or other cause of eclampsia carefully considered. Sometimes with serious edema and after serious hemorrhage the heart becomes very slow, unless some exertion is made, when it will beat more rapidly than normal. This probably represents a diminished cardiac nutrition.

The cardiac lesions that cause a pulse to be slow are sclerosis or thrombosis of the coronary arteries, fatty degeneration of the myocardium and Stokes-Adams disease.

It is therefore seen that when a pulse is slower than normal, even below 65 beats per minute, the cause should be sought. If no functional or pathologic excuse is discovered, it must be considered normal for the individual, and as above stated, even 58 or 60 beats per minute are in many instances normal for men. This is especially true with beginning hypertension, and may be true in young men who are athletic or who are oversmoking but are not being poisoned by the nicotin, as shown by the fact that their hearts are not rapid, that they are not having cardiac pains, that they do not perspire profusely, and that they do not have muscle cramps. A pulse of from 50 to 55 is liable to be seriously considered by an insurance company in deciding the advisability of the risk, and below 50 must be considered as abnormal.

If a person has been long accustomed to a slow-acting heart, there are no symptoms. If the heart has become slowed from disease or from any acute condition, the patient is likely to feel more or less faint, perhaps have some dizziness, and often headache, which is generally relieved by lying down. Sometimes convulsions may occur, epileptiform in character, due possibly to anemia or irritation of the brain. If the slow heart does not cause these more serious symptoms, the patient may feel weak and unable to attend to his ordinary duties. As previously urged, an abnormally slow heart after serious illness should be as carefully cared for as a too rapid heart under the same conditions. Probably often a myocarditis and perhaps some fatty degeneration are at the base of such a slowed heart after serious infections.

A heart that has not always been slow but has gradually become slow with the progress of hypertension and arteriosclerosis will often disclose on post-mortem examination serious lesions of the coronary arteries.

Deficiency in the thyroid secretion will always cause a heart to be slower than normal. The more marked and serious the hypothyroidism, the slower the heart is likely to be. When such a condition is diagnosed the treatment is thyroid extract; or if the insufficiency is not great, small doses of an iodid should be given. In either case it is sometimes astonishing how rapidly a slow, sluggishly acting heart improves and how much improvement there is in the mental condition of the patient.

In acute slowing of the heart, as in syncope, the patient must immediately lie down with the head low, possibly with the feet and legs elevated, and all constricting clothing of the abdomen and chest should be removed. Whiffs of smelling-salts may be given; whisky, brandy or other quickly-acting stimulant, not much diluted, may also be given. Aromatic spirit of ammonia, camphor, a hypodermatic dose of strychnin or atropin if deemed necessary, a hot-water bag over the heart, and massaging of the arms and legs to aid the return circulation, are all means which are generally successful in restoring the patient's circulation to normal. Caffein is another valuable stimulant, perhaps best administered as a cup of coffee. Digitalis is not indicated; neither is nitroglycerin, unless the slow heart is due to cardiac pain or to an angina.

Some patients have syncopal attacks with the least injury or with any mental shock. Such patients as soon as restored are as well as ever. Other patients who faint or have attacks of syncope should remain at rest on a couch or bed for some hours.

A tangible cause being discovered for an unusually slow heart is sufficiently indicative of the treatment not to require further comment. While generally toxins from intestinal indigestion make a heart irritable and more rapid, sometimes they slow a heart, and in such cases the heart will be improved when catharsis has been caused and a modification of the diet is ordered.

(To be continued)

Beware of a Full Bladder.—As long as the possibility of the full bladder is not definitely excluded great caution should be exercised in making and especially in expressing a diagnosis. A distended bladder may be a great wrecker of reputations.—Arthur E. Giles in *Clin. Jour.*

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A NEW CONGENITAL ANOMALY IN NUTRITION

The existence of distinctive inborn errors of metabolism has become as firmly established in medicine as has the occurrence of congenital defects which manifest themselves in some more patent anatomic anomaly. Alkaptonuria and cystinuria are now recognized as illustrations of inherited perversions of the usual chemical changes which the proteins undergo in the normal course of their transformations in the cells and fluids of the organism. Earlier it was believed that the chemical upset which is responsible for the appearance of abnormal products, such as arise in the urine in the two conditions cited, had its seat in the gastro-intestinal tract. The appearance of unique derivatives of the proteins was charged to some exceptional bacterial invasion of the digestive canal; but the essential features of alkaptonuria and of the persistent elimination of cystin could not be imitated or induced by any scheme of bacterial inoculation or experimental procedure. It became more and more clear that the defects of metabolism, to whatever they may be due, are readily tolerated almost indefinitely by the individual; and the history frequently shows that they were present from very early periods and bore the stamp of inherited abnormalities. Cystinuria is probably an anomaly in the protein metabolism in which the cystin derived from the disintegration of the albuminous molecule for unknown reasons is not destroyed as it ordinarily is. The anomaly in the case of alkaptonurics is currently explained on the hypothesis that the demolition of the protein fragments, tyrosin and phenylalanin, which ordinarily is assumed to take place into homogentisic acid, stops at this point in these patients. Their organism has lost the capacity to rupture the benzene nucleus, and the undestroyed homogentisic acid — the distinctive component of the urine in alkaptonuria — is excreted as such. If one cares to venture into the domain of speculation it may be assumed that "the subject of alkaptonuria or cystinuria lacks an enzyme to which is intrusted a particular metabolic task which in consequence fails to be carried out." Such explanations involving the alleged deficiency or absence of some essential enzyme must, however, be accepted with extreme reserve, because it has come to be a familiar habit in pathology to ascribe chemical defects or perversions to the lack or the development of this or that enzyme. It is a convenient way of escaping a difficult proof, and the enzyme hypothesis has been greatly overworked.

Dr. A. E. Garrod, to whom we owe much of our systematic knowledge of these inborn errors of metabolism, and Dr. W. H. Hurtley of London have described a case of steatorrhea which appears to inaugurate a new type of congenital family defects.[1] An excess of fat in the stools[2] may, of course, be occasioned by a variety of conditions, and the term "fatty stools" is usually applied only in those cases in which there are visible masses of fat in the feces, or the excreta have a distinctly oily appearance. This rarely occurs from undue ingestion of fat unless a very prompt evacuation of the upper bowel has resulted. Diseases of the intestine, such as enteritis, ulcerations and amyloid conditions, often interfere with the absorption of fat. The fatty fecal discharges that follow the obstruction of the bile-ducts are familiar, and the cause is at once revealed by the color of acholic stools. The most characteristic cause of typical fatty stools is disease of the pancreas or obstruction of its ducts, whereupon a real steatorrhea may occur.

The novel case presented by Garrod and Hurtley involves a boy who had been subject from infancy to the passage from the bowel of liquid fat which solidified on cooling. He exhibited no other morbid symptoms, was well-grown and well-nourished, and in no way infantile. Naturally attention was at once centered on the possible existence of pancreatic disease; but the signs of this all failed. The fats were usually fairly well split (which is not true in the absence of pancreatic secretion); and the impairment of absorption was not dependent on deficient splitting or digestion of fats, since improved saponification of the ingested fats was not followed by improved absorption. There were no manifestations of disease of the intestines; and on a diet containing very little fat the stools assumed a normal appearance and consistency. The investigations of Garrod and Hurtley point to an error in fat absorption in this case, accompanied by, but not dependent on, a limitation in the power to split fats. These authors suggest that some function of the pancreas may be in abeyance. There was no defect in the pancreas secretion as a whole, for protein digestion was apparently unimpaired. The high degree of tolerance of carbohydrate afforded evidence of activity of the internal secretion of the gland, so that its influence on fat absorption is alone open to suspicion. The intimate clinical association of true steatorrhea with lesions of the pancreas favors this view.

The experience in this case emphasizes what has so often been pointed out of late in these columns, namely,

1. Garrod, A. E., and Hurtley, W. H.: Congenital Family Steatorrhea, Quart. Jour. Med., 1913, vi, 241.

2. We note, as Garrod and Hurtley also point out, that the term "steatorrhea," or "stearrhea," is unfortunately defined in dictionaries in a quite different sense, namely, as what is commonly known as "seborrhea." This is the only definition thereof given in Webster's, for example.

that so-called functional tests have limitations which must constantly be kept in mind. The uncertain results of tests of the efficiency of the pancreas need excite no surprise; for, as Garrod and Hurtley remark, the pancreas is the seat of diverse morbid processes of widely different characters, some of which cause blockage of its ducts, while others induce changes in its secreting structures, and others again do both.

Perhaps the most interesting feature of this case of steatorrhea, the first to be described as congenital, and unattended by any signs of illness, lies in the probability that the rare inborn error was probably a mendelian recessive characteristic. The same anomaly was exhibited by another child of the same parents, who are first cousins. The family tree thus closely resembles that of an alkaptonuric family[3] in which two out of five children of a first-cousin marriage were affected. By way of explanatory comment we may quote from the English investigators that such rare recessive characteristics will be especially apt to manifest themselves in children of parents who are closely related; for intermarriage of stocks in which they are transmitted will afford the best opportunities for the union of recessive gametes (as the biologist expresses it), and the appearance of recessive qualities which may have been dormant for generations. Now that attention has been directed to a new anomaly, other cases will doubtless be observed and placed on record.

THE LIPOIDS AND NUTRITION

Any statement regarding the rôle in the organism of the so-called lipoids must be prefaced by an admission of the vague and utterly indefinite significance of this expression. To the chemist it seems incongruous to group together such heterogeneous substances as cholesterol and lecithins solely because they happen to exhibit somewhat similar solubilities in unspecific organic solvents like alcohol and ether. Nevertheless the alcohol-ether-soluble constituents of tissues and cells have been considered by biologists and physicians for some time in a collective way; and at present it is impossible to examine the literature of immunology or of nutrition without taking cognizance of the "lipoids," however much one may justifiably object to the extreme inappropriateness of the designation and the unscientific uncertainty attendant on its use.

Some time ago we called attention[1] to Stepp's contention that some substance or substances of the lipoid class are indispensable to life. Mice invariably die when the food on which they ordinarily throve was thoroughly extracted with alcohol and ether prior to its use in the diet. The addition of lipoid extracts from various materials such as brain, egg-yolk, etc., sufficed to restore the depleted dietaries to nutrient efficiency. In the course of these investigations Stepp[2] observed that the restoration of the extracted lipoids, that is, the alcohol-ether-soluble components of the foods, was not effective in realimenting the animals unless precaution had been employed to prevent the application of higher temperatures in the manipulations involved in the extraction of the food materials. Not only heating with alcohol, but also boiling with water render a previously adequate food insufficient for permanent maintenance of health and nutritive equilibrium. This destruction of nutrient potency does not apply to the proteins, inasmuch as suitably prepared protein-free lipoid extracts remedy the inadequate character of foods that have been boiled in water.

These reports of the extreme heat-instability of an essential constituent of the dietary, and the apparent inability of an organism to construct suitable lipoids *de novo*, as it undoubtedly synthesizes its own tissue proteins from digestion fragments, have an immediate bearing on dietetic habits and culinary practices. There is other evidence that the prolonged heating of foods as in cooking may not be without serious import. It crops out at intervals in the debates about scurvy and has furnished an almost endless discussion in relation to the pasteurization or sterilization of certain products. Further than this, the studies of Gardner in London give justification for the belief that the organism conserves its own supply of cholesterol most carefully. The losses of cholesterol or its derivatives in the stools represent food residues, not tissue wastes under conditions of adequate nutrition. Cholesterol secreted into the alimentary tract is reabsorbed.

It will be a great step in advance when the "lipoid" substances are suitably isolated and distinguished. The current method of examining them collectively can lead only to continued confusion. When once the appropriate distinctions are made, further progress is certain to follow. The brain chemists have made a beginning which must be extended into other fields.

INHIBITORY PHENOMENA OF THE STOMACH

The idea of inhibition as applied to physiologic processes has been slow to win recognition in questions of medical import. We have long been accustomed to speak of the stimulation of some function or other by the various agencies that play on the organism. Thus our nervous and muscular systems are stimulated to more active response in diverse ways; our digestive functions are incited to activity both through nervous channels and by chemical agents now called hormones. All of this is a positive sort of response. When the stimuli are withdrawn or cease to operate, the corresponding reaction fails to appear, because it is no longer suitably initiated. In contrast to this passive type of cessation of function due to the withdrawal of stimuli, we are learn-

3. Compare Garrod, A. E.: Lancet, London, 1908, ii, 5.

1. The rôle of Lipoids in Nutrition, editorial, THE JOURNAL A. M. A., Nov. 4, 1911, p. 1540.

2. Stepp, W.: Ueber die Hitzezerstörbarkeit lebenswichtiger Lipoide der Nahrung, Ztschr. f. Biol., 1912, lix, 366.

ing to recognize an active sort of stoppage of physiologic activities attributable to direct inhibitory impulses.

This positive inhibition as contrasted with a mere passive relaxation of effort is undoubtedly a phenomenon of pronounced importance. To the more familiar illustrations of inhibition as they are exhibited in the behavior of the heart and in certain types of cerebral inhibition, Professor Carlson has added further interesting examples in his fascinating studies on the physiology of the human stomach.[1] Mention was recently made in THE JOURNAL[2] of the unique subject — a modern Alexis St. Martin — whose gastric functions have been investigated at the University of Chicago. We referred to the demonstration that the contractions of the empty stomach give rise to the sensation of hunger and are, in fact, the undoubted cause of hunger "pangs." Further investigation shows that these contractions can be inhibited reflexly in a variety of ways. Both the tasting and chewing of palatable foods, which fail (owing to the subject's esophageal stenosis) to reach the stomach itself, bring about the speedy cessation of the rhythmic contractions of this organ. A careful analysis of the factors here involved, of the part played by the mechanical act of mastication and by the independent element of taste, discloses the cooperation of both of these in the inhibitory process. Chewing a tasteless substance like paraffin or gum is effective, although less so, on the whole, than are gustatory stimuli. The masticatory movements do not cause inhibition if the mouth is empty, so that the inhibition produced by chewing indifferent substances is presumably initiated by mechanical stimulation of afferent nerve endings in the mouth. Stimulation of the organs of taste, as it is produced by holding sweet, bitter, salty or acid substances in the mouth, promptly checks the gastric movements, the inhibition being proportional to the concentration of the sapid substances. Swallowing also effects a temporary inhibition. Carlson inclines to the view that these phenomena are fundamental reflex inhibitions, associated with, but not dependent on, the states of consciousness. The psychic element in all such reactions is, of course, difficult to estimate or exclude.

Certain details in the mechanism of the behavior just described seem to be settled. The "psychic" secretion of gastric juice described by Pawlow is familiar to our readers. When the chewing or tasting of palatable foods leads to copious secretory response, the gastric juice produced is one factor, though not the only one, in the accompanying inhibition of the stomach movements. The latter is here due not to the process of secretion, as such, but to acid stimulation of nerve endings in the gastric mucosa. Under appropriate conditions the reflex inhibition from the mouth merges into the acid inhibition from the stomach.

1. Carlson, A. J.: Contributions to the Physiology of the Stomach, III. Am. Jour. Physiol., 1913, xxxi, 212.
2. The Stomach in Hunger, editorial, THE JOURNAL A. M. A., Feb. 8, 1913, p. 448, and Feb. 22, p. 598.

Inasmuch as the stomach movements determine the sensation of hunger, the tasting and chewing of palatable foods abolishes this quite as might be anticipated. Now Carlson points out that in every-day experience appetite is augmented by tasting palatable products. Since hunger is stopped in this way it may be concluded that hunger has reached its biologic end as a motor stimulus when the foods reach the mouth, and at that stage appetite takes the place of hunger as a guide to the quantity of foods to be ingested. Finally, we are reminded of the fact that although normal gastric juice inhibits the movements of the empty stomach, it does not check the stomach movements in digestion. This would indicate, in Carlson's opinion, that the motor activities of the empty and of the filled stomach involve, in part, different mechanisms.

THE IMMUNITY OF THE INTESTINE FROM DIGESTION BY THE ALIMENTARY ENZYMES

Why the portions of the alimentary tract within which a vigorous digestion of the foodstuffs takes place escape the proteolytic disintegration to which their contents are subjected has long been the subject of hypothesis and debate. In the case of the stomach, the fact that pepsin digestion proceeds best in acid mediums has made it logical to assume that the resistance of the gastric tissues is attributable to the neutral or slightly alkaline reaction of the tissues, constantly maintained and supplemented by the reaction of the circulating blood. This hypothesis of the neutralization of the acid of the gastric juice by the alkali of the blood and tissue fluids leaves us in the lurch, however, when we attempt to apply it to the comparable situation in the intestine, where the pancreatic juice can act favorably under the very conditions of reaction which also pertain in the tissues. This does not contradict the view that the reason for the non-digestion of either stomach or intestine during life is to be sought for in the normal circulation. The proper nourishment of the tissues is dependent on the integrity of their blood-supply; and if, as has been maintained, the defense of the alimentary tract against self-digestion lies in some specific resistance of its living cells, the circulation must have at least an indirect rôle in maintaining the normal functioning of the cell protoplasm. The acid neutralization theory as applied to the stomach is, however, not thereby made tenable.

This vague distinction between the living and dead protoplasm is no real explanation of the defense of the organs against self-digestion; for it merely directs attention to the new question as to what the resistance of the living protoplasm consists in. To answer this the existence of anti-enzymes has been postulated, and considerable interesting and suggestive evidence has been brought forward along such lines. Thus antipepsin and antitrypsin have become recognized terms. It can readily be demonstrated that the blood-serum possesses

a native resistance to tryptic digestion which is no longer manifested when the serum has been heated. Intestinal parasites furnish similar evidence of an equipment in thermolabile anti-enzymes. Biologically this conception of the development of anti-enzymes as a protective device in the organism is quite analogous to that of the formation of other antibodies which play a conspicuous part in the immunity reactions of the body. In this sense there would be merely a specific case of a widely demonstrated response against detrimental agencies. Without denying the existence in the blood and certain tissues of substances which can impede digestive changes, it seems improbable that agents apparently possessing a comparatively slight retarding power should suffice to overcome the vigorous proteolytic efficiency that the gastric and pancreatic juices can demonstrate. Are there no other or added protective agencies?

Further possible explanations of the immunity of the alimentary wall to destruction by the digestive juices poured into the intestine have suggested themselves. It is not improbable, for example, that the enzymes fail to penetrate the mucous membranes which line the digestive tract. If such an explanation applies in any degree, the protective feature is more than likely to be associated in some way with the mucosa. In that event other mucous membranes might be expected to exhibit a comparable resistance to digestive enzymes. Kirchheim[1] has shown this to be the case. Like the intestine, the urinary bladder and esophagus are resistant to large volumes of concentrated pancreatic extracts placed in contact with their inner mucous surfaces. In this respect, therefore, the intestine occupies no isolated position. The resistance is not, however, a property of the living tissues in general. A small amount of pancreatic extract injected directly into the intestinal wall speedily gives rise to hemorrhagic necroses which involve not only the deeper portions of the wall, but the epithelial layer as well. Pancreatic extracts inactivated by heat so that they can no longer digest proteins are practically inc[illegible] when injected in the same way. The striking difference in the resistance of the intestine to the same extract introduced into its lumen and into its wall speaks against the efficiency of any antitryptic power of the tissue proper in maintaining the integrity of the structure.

The alimentary mucosa secretes a peculiar viscid product which is familiarly spoken of as mucus. This substance is believed to be quite resistant to proteolytic changes by enzymes. By forming a protective coating over the interior of the alimentary tract it might well act to preserve the underlying structures from contact with the digestive fluids. This is a far more likely conception of its rôle than the view that the mucus directly inhibits the enzymes. If the latter were true, and the mucus exhibited a sort of antitryptic property, then one would expect a pronounced secretion of mucus to accompany every outpouring of pancreatic juice; and physiologically this reaction would tend constantly to render inert the digestive secretions, whereas they are obviously produced for purposes of functional efficiency. The chemical anti-enzymatic function of the alimentary mucus must therefore be dismissed as unlikely.

Kirchheim has summarized the situation in this way: There is no specific immunity of the intestine to the pancreatic enzymes. In so far as mucous membranes interfere with the ready absorption of trypsin they act as a protection to the underlying tissues. Any tissue the surface of which permits the absorption of trypsin only slowly will be protected; any tissue which is put into direct contact with the pancreatic enzymes can be attacked thereby. Added to all of this is the fact that however vigorous pure pancreatic juice may be in its proteolytic activity, the enzyme concentration which remains in the contents of the digestive tract after the admixture of the secreted juice with the food residues is relatively small. Whether the enzyme is adsorbed on the substrates on which it acts or is diluted by the admixtures it receives or is largely destroyed or transported, the fact remains that the mixture of chyme with which the intestinal wall actually comes into contact ordinarily shows only a slight excess of free enzyme. The experiments indicate that in every-day experience the intestine scarcely requires any protection against the digestive power of its contents

1. Kirchheim, L.: Ueber den Schutz der Darmwand gegen das Trypsin des Pancreassaftes, Arch. f. exper. Path. u. Pharmakol., 1912, lxxi, 1.

"THE DOCTORS AND ADVERTISED MEDICINES"

An interesting and instructive discussion of the "patent-medicine" business recently appeared in the editorial pages of the Philadelphia *North American* under the above quoted title. The editorial well described the difficulties which have beset that paper because of its advertising policy. It says that argument and pressure alike have been brought to bear by the "patent-medicine" men because it refuses certain kinds of medical advertising and it explains on what grounds the rejection or acceptance of "patent-medicine" advertising is based. On the other hand, the *North American* says that it has received almost as much criticism from the medical profession because it has not excluded *all* proprietary remedies. But, says the paper, "we believe their [the physicians'] contention that all these remedies are without merit is untrue." Then it propounds this question to the medical profession:

> Why is it that a remedy or preparation which the most ethical and conservative of them prescribe, so long as it is advertised only in medical journals, is immediately scouted and condemned by them when it appears among newspaper advertisements?

The answer to this question is that the physician does not condemn a non-habit-forming and non-toxic preparation that is first introduced only to the medical profession via medical journals but later is advertised

direct to the public in newspapers, if — and this is a big "if" — the preparation is advertised with the same degree of truthfulness in the daily press as it was advertised in medical journals. To particularize, the *North American* refers to an ointment that a few years ago was advertised only in medical journals but more recently has been widely advertised in the newspapers. The paper says that since the preparation has gone direct to the public the doctors "have discovered that it is a useless sham." The ointment referred to, doubtless, is Resinol. Our answer to the *North American's* criticism is a simple one. The objections to Resinol are not that it is advertised in newspapers but that it is advertised fraudulently in newspapers. For instance, when the Resinol advertising was confined to medical journals no such statements were made as: "Resinol heals the worst cases of eczema." Yet this is exactly what has been claimed for this preparation in the newspapers. The outrageous falsity of such claims can be fully appreciated only by physicians who recognize and admit that many cases of eczema baffle the skill of men who have devoted a lifetime to its study.

The *North American* refers also to "a tonic and nerve food whose name is becoming a household word through advertising." And it says further:

> It seems but yesterday that it was recommended by specialists and endorsed by the professional journals. But now that it is urged direct on the public through magazines and newspapers, the doctors tell us that it is only a form of "cottage cheese" utterly without merit.

This statement contains both truth and error. It is true that Sanatogen — the product referred to, of course — has been "recommended" by physicians and "endorsed" by medical journals. And we would say that the same sort of physicians who endorsed it before it was advertised to the public are still endorsing it; and the same sort of medical journals which praised it before it went into lay publications are still praising it — because they are carrying the advertisements themselves. No doctor who had given the matter thought would say that Sanatogen is utterly worthless. In fact, it would be absurd to say that cottage cheese is worthless. What we have said, both at the time that it was advertised only in medical journals and to-day, is that Sanatogen is advertised under claims that mislead and thereby defraud the public.

The *North American* holds, and we believe rightly so, that simple home remedies, proprietary or otherwise, are legitimate articles of trade. To illustrate its point, however, the newspaper falls into an error that is not uncommon. This can best be explained by quoting:

> Having consulted our physician for a slight stomach disorder, we received a prescription and had it filled at a cost of 50 cents. The prescription, as it happened, was returned with the bottle of liquid. During a discussion, the paper was shown to an intern in a Philadelphia hospital. He said the formula was very well known; was used by physicians everywhere. And the same thing, he added, was on the market in convenient tablet form, sold under a registered name. We bought a package at a cost of 5 cents. The same remedy from a prescription, with a physician's fee, cost $2.50.

The fallacy of this argument is evident to every physician and to the average layman. The editor who consulted a doctor for a "slight stomach disorder" may have had merely a passing indigestion or he may have had incipient cancer of the stomach or other serious affection. That he had the former, he learned from the physician. It was for this information, primarily, that he paid his $2, not for the prescription. Furthermore, even admitting that the prescription was, as the intern said, a well-known one, the intern did not know and could not know that "the same thing . . . was on the market in convenient tablet form, sold under a registered name." The only man who knows the composition of the "convenient tablet" is the manufacturer of the tablets. Evidently, then, the editorial writer could have had no means of knowing that he was getting "at a cost of five cents" the "same remedy" that was called for by the doctor's prescription. In other words, in the one case the editor obtained an expert opinion on the matter of vital interest to him — his physical condition — and he obtained for the treatment of his condition a preparation whose composition was known. For these, he paid $2.50. In the other case, he would have obtained, for an unknown — to him — ailment, a box of tablets of unknown composition that might or might not have been of value. If the editor, in this instance, had had an incipient gastric cancer and decided to "treat it" in the cheapest way — by buying five cents' worth of tablets — he would have saved $2.45 and possibly lost — his life.

While, then, we cannot accept all of the arguments put forth by the *North American,* we believe that the editorial as a whole is an excellent one. It represents the attitude of the intelligent layman toward the "patent-medicine" evil. That the medical profession is responsible for at least a part of the evil we must regretfully admit. The prescribing of unknown preparations has been a practice so common in the profession as to nullify to a large extent all efforts that are being made toward ridding the public of the nostrum evil. We cannot too often assert, however, that the medical profession does not believe that there is no place in commerce for simple home remedies. Neither can the medical profession object to any proprietary preparation solely on the ground that it is advertised in the lay press. What it does object to is the fraudulence that is apparently inseparable from the exploitation of such preparations when sold to the public

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"OFFICIAL INFORMATION"—MEDICAL!

In order to provide a little amusement for our readers we frequently publish quotations from the lay press on medical matters. Were it not that the subject has a serious side we would be inclined to quote liberally from

the official attempt of the government to enlighten its citizens on the "Friedmann Treatment for Tuberculosis," a document submitted by the Secretary of State to the President and transmitted by the latter to the Senate, by which it was published as Senate Document No. 1018. With the exception of a less than two-page introduction by the consul-general at Berlin, this document consists entirely of a translation of Dr. Friedmann's Berlin address and the discussions on it as they appeared some time ago in the *Berliner klinische Wochenschrift*.[1] The technical language of this translation can be compared only to that sometimes seen in the unedited letters of "voodoo" and similar "doctors."

On the first two pages of this document is a discussion of efforts to obtain from an "unvirulent," "untoxic" "exciter" a substance which would have the specific properties of the "exciter" without its "toxicalness," a disadvantage under which "the Alt tuberculin" whose "image still flickers in history" is stated to have suffered; this object was finally achieved by the use of "an unvirulent race of tubercles" but the "successful therapeutic results continued to be confirmed" only "a long time afterward"—and so on for fifty-four pages. This publication can be recommended to any one who wishes to test at the same time his knowledge of the German language and of tuberculosis; but we fear that some fairly familiar with both would have difficulty at times: for example, what is the diagnosis in the case of the patient who "had sharp pains in the chest, considerable oppression above to the right, and rattling in the small bladder"?[2] It might be cruel to inform the suffering, unsuspecting public of the existence of the "small bladder" in which "rattling" may occur were it not that the condition is curable; thus in the case of the patient cited, the "oppression and rattling" disappeared and the "hemoptoe" never appeared again after the treatment.

Why the government came to publish such a ridiculous document is an interesting question, the answer to which may throw some light on the manner in which the United States endeavors to handle medical problems. As appears from the President's letter of transmittal, the Senate passed a resolution requesting the President "to submit to the Senate the results of any investigation of the Friedmann cure made or being made by the American consul-general in Germany." The Senate probably made this request as the result of the sensational newspaper reports. The President turned the request over to the Secretary of State, who has charge of our foreign affairs, and he in turn transmitted it to the American consul-general at Berlin, who is there to look after our business relations with Germany. The consul-general did all that could be expected of a layman; he obtained from Dr. Friedmann the information that patients desiring his treatment must spend several weeks in Berlin (where "room and board may be obtained at the usual prices"); he obtained an opinion on the new remedy from a "local physician," and sent copies of Friedmann's address and the discussion on it. The fact that patients must go to Berlin for treatment was sufficiently advertised in the daily press; the German medical journals containing Friedmann's address were received by all the leading medical libraries of the United States, and by many private subscribers, in November; side-lights on the subject were given by the Berlin correspondents of the American medical journals. Would it not have been simpler for the Senate to appeal (through the President if this formality were necessary) to the Surgeon-General of the Public Health Service, who was presumably in possession of all this information several weeks ago and without whose sanction the "cure" cannot be sold in the United States? Were it deemed desirable to obtain further information on the subject, could not the Senate have authorized the Public Health Service to send to Berlin a man who is conversant with tuberculosis? To us this would seem a more direct method than the one pursued—but then the medical profession would have been deprived of the pleasure of reading this humorous document.

1. Abstracted in THE JOURNAL, Dec. 7 and 14, 1912. The subject has been discussed in various articles in THE JOURNAL, references to which are given in Queries and Minor Notes, Feb. 8, 1913, p. 466.

2. The word "oppression" in the original is *Dämpfung*, meaning dulness, and "rattling in the small bladder" is *kleinblasiges Rasseln*, which some would render "fine bubbling râles."

Current Comment

AN INHERITED ANOMALY

Anomalies of form and function are common inborn defects which come to the attention of every physician in the course of his routine of experience. Oddities of human skin color, aside from familiar pigmentation defects or cutaneous blemishes, are less frequently encountered. An interesting variation exhibited by a family of spotted negroes has been described by Simpson and Castle.[1] The "piebald" condition of the skin, which is spotted with white in a fairly definite pattern not unlike that of certain domesticated animals, made its appearance as a mutation or sport in a negro family of the Southern United States about sixty years ago. Aside from the immediate peculiarity of this rather unique variation there is decided biologic interest in the fact that it has already shown itself fully hereditary through two generations of offspring. To the student of heredity the data that have been collected in reference to the family are very suggestive and quite in harmony with the newer doctrines of inheritance. The negro founders of the "spotted line" were entirely normal in appearance and devoid of the characteristic pigmentation of their offspring. The pattern of the latter may be described, in terms of its black areas, as having a prominent back stripe which begins on the head and extends the entire length of the trunk, narrowing below and ending on the buttocks. The white areas are in all cases devoid of pigment, while the pigmented areas are apparently not subject to change from the definite boundaries fixed at

1. Simpson, Q. I., and Castle, W. E.: A Family of Spotted Negroes, Am. Naturalist, 1913, xlvii, 50.

birth. Of the children belonging to the second generation eight are spotted like the mother, the remaining seven being normal, without spots. Six of these fifteen children, three normal and three spotted, married normal negro mates. The normals have had only normal children, in all seven. The spotted ones have had nine spotted and two normal children. There is no sex-limitation in the transmission of the spotted pattern, which behaves, according to Simpson and Castle, consistently as a simple mendelian dominant character, the only peculiarity being the excess of spotted grandchildren over the expected one-half. This is quite probably a chance deviation. It is suggested that if in the course of time two spotted individuals of this race, not closely related, should marry each other, a new type of individual would be produced and would transmit the unique character in all its germ cells. What the appearance of this race would be can only be conjectured. The present descendants of the spotted family are now widely scattered, some of the spotted ones being connected with public exhibitions. Inasmuch as their peculiarity is an "economic asset" to them it is not likely to be a hindrance to their racial increase.

DOES MANGANESE OCCUR IN THE BLOOD?

Scattered statements in the literature of physiologic chemistry have furnished the authority for the occasional announcement that manganese is not infrequently present in human blood and in the liver; but it is said to be neither constant in its occurrence nor significant in amount. At best, therefore, it must be regarded as a rare element in the tissues of higher animals. In the lower forms, such as the fresh-water clams, manganese has been asserted to be a normal tissue constituent.[1] Bertrand has reported a constant functional relation between manganese and the enzymes which are designated as oxydases. If this were found to be correct it would be logical to assume a biologic rôle for this element in the blood and tissues. The possible physiologic deportments of very small amounts of elements or their compounds no longer awaken the surprise which they did before the discovery of iodin in milligram amounts in the body and its localization in the thyroid gland. Claims have been made for the common occurrence of arsenic in minute traces in the tissues. Here, as is so often the case in biochemical fields, the validity of conclusions respecting the presence of very small amounts of substances in the organism must be judged by the accuracy of the analytic methods which have been employed and the care with which all sources of error or contamination have been controlled. For this reason haphazard statements about the finding of this or that unexpected element have repeatedly been subjected to critical revision and failed to stand the test. In a similar spirit of criticism Bertrand and Medigreceanu[2] have approached the question of the reputed manganese content of the blood. The outcome of a careful investigation at the Pasteur Institute is that if manganese occurs at all in the blood of man and the higher animals it is in quantities far smaller than the scattered previous reports had led one to believe. In nine species of blood examined the content at best did not exceed one-twentieth of a milligram of the element per liter. Whether the minute traces sometimes found by the refined analytic procedures employed represent a real functional component of the blood or merely an accidental and insignificant contamination remains for future experience to determine. Until some definite evidence is presented the probable biologic importance of manganese in the blood may safely be disregarded.

1. Bradley, H. C.: Manganese, a Normal Element in the Tissues of the Fresh-Water Clams, Unio and Anodonta, Jour. Biol. Chem., 1907, iv, 151.
2. Bertrand, G., and Medigreceanu, F.: Recherches sur la manganèse normal du sang, Ann. de l'Inst. Pasteur, 1912, xxvi, 1013.

"CLINICAL REPORTS"

As physicians, we have long accused the public of being peculiarly susceptible to the *post hoc ergo propter hoc* line of reasoning in so far as it relates to the action of medicinal agents. One of the most discouraging phases of the fight against "patent medicines" is the impossibility of persuading John Jones, who has used Dr. Rogue's Ready Relief, that the nostrum had nothing to do with his recovery. You may prove to him that Ready Relief is only pink hydrant-water, but he still insists that as he was sick before taking it and recovered after taking it, there can be no doubt that Ready Relief cured him. But really we should not be too hard on the public. There are physicians, men who have had, or are supposed to have had, scientific training, who are just as susceptible to this error in reasoning as John Jones is. The sheaves of uncritical "clinical reports" that the exploiters of utterly worthless "ethical proprietaries" can furnish in support of the medicinal virtues of their nostrums constitute sufficient evidence to prove that the "after this, therefore because of this" style of reasoning is not confined to the laity. Unfortunately for scientific medicine there are many, many doctors who, in standing up for their pet proprietary, take the attitude, so ably described by George Eliot, of those persons who are distrustful of scientific methods. They will grudgingly admit that while, as a general thing, two sides of a triangle are together greater than the third side, yet after all we must be careful, as it is easy to carry mathematical reasoning too far!

LET THE PEOPLE KNOW

We print in our Propaganda for Reform department in this issue an exposure of a class of fakers of a different order from the "patent-medicine" swindlers and mail-order quacks whose exposés have occupied space in this department heretofore. There is room for only part of this "story"; in its completeness it will be printed in pamphlet form. This matter will not enlighten physicians; they already know — in a general way, at least — the fraudulent character of such concerns. If the facts we present are to be buried in THE JOURNAL, the effort of gathering them will have been wasted. There must be some way of enlightening the people, and that way is to circulate the "story" in pamphlet form, especially in those communities which are being preyed on by these fakers. But how? Here are the facts gathered and made available; it remains

for the profession to see that they reach the people. The public tolerates and is swindled by these and similar frauds because it does not know better; because it is ignorant of the facts. We have no faith in the dictum, credited to Barnum, that the American people like to be humbugged. It is not true. Neither the American nor any other people like to be humbugged. They are humbugged because they do not know better; because they are ignorant. Give them knowledge; give them the facts, and in such a way as to convince them that they are facts, and the people will no longer be duped. We have made these facts available and we hope our readers will be sufficiently interested to do their part in enlightening the public. Just a hint. It will be noticed that the Business Men's Association of Wheeling, W. Va., received these fakers in a very effective way. Probably that association acted because some of the physicians in Wheeling called attention to the matter. In any event, if the business organizations of the places in which these fakers are working are approached in the right way, they will cooperate in enlightening the public. This is a case in which the commercial side of the proposition can be used as an argument. Aside from the fact that the people are being duped, is the other fact that money is being taken out of and not being brought into the town.

THE TUBERCLE BACILLUS A SYNTHETIC PRODUCT!

It has been discovered once more that the tubercle bacillus is not the cause of tuberculosis. This time the news comes from France in the shape of a pamphlet by Albert and Alexandre Mary, authors of some curious scientific and semireligious works. The authors conclude that the tubercle bacillus is made up of a collection of granules that can be produced by mixing tuberculin and sodium glycerophosphate. Phagocytes are not animal cells but are a collection of these granules, identical with the granules of Much arranged in the form of a cell. Will the scientific world shut its eyes to such a wonderful discovery?

THE LIMITATIONS OF SPECIFICITY IN THE TRANSMISSION OF DISEASE

Recently it has been reported that a carcinoma of the mouse[1] has been successfully transplanted in rabbits. This fact is not without greater significance than may appear at first glance, for it illustrates an important tendency in medical research. It may be remembered that not so many years ago it was believed that syphilis could not be transmitted to any animal but man. After expensive experiments Metchnikoff and Roux demonstrated the inoculability of chimpanzees, using, it is said, their Nobel prize money for the purchase of these close cousins of man. Soon after this, however, it was demonstrated that less closely related (and less expensive) monkeys were susceptible, and now we have learned how to inoculate ordinary rabbits with syphilis, so that they are now in general use in many laboratories. A similar history seems to be repeating itself with other infectious diseases, which at first were supposed not transmissible from man to animals. Strauch's experiments have accomplished the widest jump in species yet recorded (and credible) in cancer investigation, and suggest, in the light of the considerations detailed above, that perhaps, after all, the specificity of tumors is not so strictly defined as we had believed, and that we cannot yet say positively that the inoculation of laboratory animals with human tumors is an impossibility.

1. Strauch: Ztschr. f. Krebsforsch., 1913, xii, 577.

Medical News

ILLINOIS

Personal.—Drs. M. W. Fitzpatrick and Wilbur C. Wood have been appointed consulting surgeons for the Wabash System in Decatur.

Rush Alumni Convene.—Drs. Marcus Whiting and John P. McMahon, Peoria, in commemoration of the thirtieth anniversary of their graduation from Rush Medical College, gave a dinner to the local alumni of the college, February 20, over which Dr. Otho B. Will presided as toastmaster.

Chicago

Weir Mitchell Before Physicians' Club.—On the annual ladies' night of the Physicians' Club of Chicago, Dr. S. Weir Mitchell of Philadelphia gave a delightfully reminiscent talk on "The Profession of Medicine in the War of the Rebellion." About four hundred were present.

Shattuck at Harvard Dinner.—At the annual Harvard banquet, February 21, Dr. Fred Cheever Shattuck, Boston, professor of clinical medicine, emeritus, in Harvard Medical School gave an address on the evolution of the new medical department of Harvard and a description of the new school. He was entertained at a luncheon on the same day by a number of local physicians many of whom had been his students at Harvard.

Personal.—Dr. and Mrs. Hugh T. Patrick sailed for Europe, February 19.——Dr. Jacob Frank has been commissioned major, M. C., Ill. N. G., and assigned to duty as secretary to the surgeon-general.——Dr. Walter H. Meents has returned after three and one-half years of study and travel abroad, including a trip around the world, and will locate in Chicago.——Dr. Caroline Hedger has resigned from the medical staff of the Frances Juvenile Home Association.

KANSAS

Thanks to Newspapers.—At a recent meeting of the Cowley County Medical Society held in Wichita, a resolution of thanks was adopted to newspapers which omit the names of physicians in attendance on patients whose cases are reported in newspapers.

Personal.—Dr. and Mrs. F. F. Allen, missionaries of Kiating, China, left Ottawa, January 31, on their return to their post of duty and sailed from San Francisco, February 6.——Dr. Lewis C. Day, Lawrence, formerly of Haskell Institute, Lawrence, has been transferred to a similar position in New Mexico.

New Officers.—Northeastern Kansas Medical Association at Kansas City, February 6: president, Dr. L. V. Sams, Topeka; secretary-treasurer, Dr. C. C. Goddard, Leavenworth.——Riley County Medical Association at Manhattan: president, Dr. Robert Leith; secretary, Dr. Thomas R. Cave, both of Manhattan.

LOUISIANA

New Board of Medical Examiners.—The governor has appointed Charles R. Mayer, New Orleans, a member of the Board of Medical Examiners to succeed himself; Dr. J. W. Belden, New Orleans, vice Dr. M. F. Howe, and Dr. R. A. Bayley, New Orleans, vice Dr. Gayle Aiken.

Personal.—Drs. George S. Brown and C. N. Chavigny, New Orleans, have been appointed members of the State Board of Examiners for Nurses.——Dr. A. R. Sweeney, Lake Arthur, has been detailed for duty at Ellis Island as acting assistant surgeon, U. S. P. H. Service, pending his confirmation by the senate as assistant surgeon.

Tour of Health Train.—The State Board of Health train started, February 7, on a tour of about seven months. After a

week on the lines of the Louisiana Railway and Navigation Company, the train starts north, going to Kansas City, Denver, Ohio and Texas, and then makes a complete tour of Louisiana, visiting all county seats and at least one or two towns in each parish.

MARYLAND

Baltimore

Medical Art Exhibit.—An exhibit of medical drawings by Mr. Max Broedel and his pupils was held in the physiologic building of the Johns Hopkins Medical School, February 20-21.

Portrait Presented State Society.—A portrait of the late Dr. Christopher Johnston, president of the Medical and Chirurgical Faculty in 1886-7 and professor of surgery in the University of Maryland, has been presented to the faculty.

Personal.—Dr. William E. Wiegand and family are taking a trip through Florida and Cuba.——Dr. Louis Rubin has resigned from the superintendency of the Jewish Hospital for Consumptives, Reistertown.——Dr. Donald R. Hooker has resigned as a member fo the board of the Henry Watson Children's Aid Society.——Dr. Clarence B. Farrar of the staff of the Sheppard Pratt Hospital has been appointed assistant physician at the New Jersey State Hospital, Trenton.

Brigade Base Hospital.—The University Hospital has been made the base hospital for the First Brigade, N. G. Md., and Dr. William J. Coleman, medical superintendent, has been appointed assistant surgeon, M. C., and assigned to duty with the Fourth Infantry. Militiamen injured at armories or camps will be sent to the hospital under special arrangements with the state, and will receive the personal attention of Major Robert P. Bay, chief medical officer of the brigade, who is a member of the staff of the hospital.

MASSACHUSETTS

Lectures in Genito-Urinary Surgery.—Dr. Hugh Cabot and his associates at the Massachusetts General Hospital are giving a course of clinical lectures to graduates in medicine on Fridays from 10 to 12 a. m., till April 25.

Carney Hospital Changes.—The ear, nose and throat departments of Carney Hospital were merged February 1, with Dr. Edward Marwick Plummer as surgeon-in-chief. The staff of the institution consists of Drs. John T. Sullivan, Timothy J. Shanahan and Dana W. Drury, surgeons; and Drs. John L. Lougee, D. Campbell Smyth, William J. Sheehan and Frederick L. Bogan, assistant surgeons.

Leper in Boston.—In the case of Manuel Silva, Boston, who has been found to be suffering from a mild form of anesthetic leprosy, the State Board of Health and Charity has committed him temporarily to the Southampton Street Hospital for Contagious Diseases, pending the breaking up of the ice in the harbor when he will be transferred to the Massachusetts Leper Colony, Penekese Island.

Antityphoid Inoculation.—The State Board of Health has given its approval to the opinion of Maj. O. U. Patterson, chief medical officer of the National Guard of the Boston district, that this precaution should be compulsory for all enlisted men. Many of the officers have already been so protected. The prophylactic may be obtained free from the State Board of Health by any physician, the same as the diphtheria antitoxin and the small-pox vaccine.

Personal.—Dr. L. Vernon Briggs has been elected president of the medical staff of the Boston Dispensary; Dr. John D. Adams, secretary, and Dr. Elmer W. Barron, Malden, treasurer. During 1912 more than 17,000 sick children were cared for by the dispensary.——Dr. F. H. Thompson has been made chairman of the Fitchburg Board of Health and Dr. A. P. Mason has been elected city bacteriologist.——Dr. Henry McLaughlin, Brookline, who has completed a quarter of a century as physician to St. John's Seminary, Brighton, was the guest of honor at a banquet, February 3, at which he was given $1,300.——Dr. John F. O'Brien has been reappointed trustee of the Consumptives Hospital Department, Boston.——Dr. Edward J. Fitzgibbon, Dorchester, Boston, has been appointed first lieutenant, M. C., M. V. M., and assigned to the Ambulance Company.

MICHIGAN

Want $600,000 for Hospital.—Members of the poor commission of Detroit have asked for an appropriation of $600,000 for a new hospital to be built on Hamilton Boulevard.

Personal.—Dr. E. P. Lockart, Norway, has been appointed surgeon of the Verona Mining Company with headquarters at Palatka.——Dr. Victor C. Vaughan, Ann Arbor, has been reappointed a member of the State Board of Health.——Dr. Charles F. Smith, Whitehall, has moved to 2587 Woodward Avenue, Detroit, and entered general practice.

Sanatorium to be Built.—The board of supervisors of Genesee County have voted an appropriation of $1,000 for a county tuberculosis sanatorium to be erected south of Flint.

General Hospital Staff Appointed.—The following announcements of appointments to the medical staff of the Detroit General Hospital are announced by Dr. John N. E. Brown, superintendent: department of internal medicine—director, Dr. Frank J. Sladen, Baltimore; Dr. Homer E. Safford, senior associate; general surgery—director, Dr. H. N. Torrey; senior associate, Dr. H. W. Hewitt; diseases of children—director, Dr. R. S. Rowland; senior associate, Dr. T. B. Cooley; associate, Dr. D. J. Levy; abdominal and pelvic surgery—director, Dr. William F. Metcalf; senior associate, Dr. E. K. Cullen; diseases of ear, nose and throat—director, Dr. J. E. Gleason; genito-urinary surgery—director, Dr. Harry W. Plaggemeyer; obstetrician, Dr. W. H. Morley; orthopedic surgery, Dr. F. C. Kidner; diagnosis and research—director, bacteriologist and pathologist, Dr. C. R. Meloy, and roentgenologist, Dr. W. A. Evans.

MINNESOTA

Wholesale Typhoid Vaccination.—The Fergus Falls State Hospital has undertaken typhoid inoculation on a large scale. All the seventeen hundred inmates of the institution are to be inoculated.

Millard Hall Completed.—Millard Hall, the main building of the medical and surgical department of the University of Minnesota, is practically completed and has been turned over by the contractors. The entire cost of the building has been $259,202.

Personal.—Dr. H. A. Tomlinson, superintendent of the State Inebriate Hospital, Willmar, is reported to have suffered a cerebral hemorrhage.——Dr. W. T. Councilman of Harvard Medical School lectured, February 25, at the University of Minnesota, Minneapolis, on "The Nature of Disease."

Tribute to Late Colleague.—The faculty of the College of Medicine and Surgery of the University of Minnesota has recorded its sorrow for the loss of the late Dr. Parkes Ritchie, an old friend and faithful associate, in the form of a memorial engrossed for presentation to Dr. Ritchie's family.

MISSISSIPPI

New Officers.—Tri-County (Tate-Panola-DeSota) Medical Society was organized at Senatobia, February 5: president, Dr. M. C. Ellis; secretary-treasurer, Dr. D. C. Laverne, both of Senatobia.——Hinds-Rankin County Medical Association organized at Jackson: president, Dr. R. S. Curry, Jackson; secretary-treasurer, Dr. J. H. Fox, Asylum.

Personal.—Dr. Ethelbert H. Galloway, Jackson, has been elected executive secretary of the State Board of Health, vice Dr. W. W. Smithson, appointed superintendent of the State Insane Hospital, Jackson.——Dr. L. H. Howard, Jackson, was robbed by hold-up men near his home, February 10.——Dr. Nolan Stewart, superintendent of the State Insane Hospital, Jackson, has resigned.

MISSOURI

Personal.—Dr. Elizabeth Enz, Kansas City, who has been ill with neurasthenia, has gone to Florida.——Dr. E. C. Hill, St. Joseph, is reported to be seriously ill at his home.——Dr. Daniel Martin, St. Joseph, has been appointed a member of the board of managers for the St. Joseph Hospital for Tuberculosis.

To Investigate Sanatoriums.—At a special meeting of the Kansas City Hospital and Health Board, February 11, a committee was appointed consisting of two doctors and one layman to investigate all sanatoriums in the city with especial reference to the care and treatment of patients therein, and the provision for safeguarding patients against fire and other casualty.

Gift to Medical College.—The Pagel collection of books on the history of medicine, being the library of the late Prof. Julius Pagel, has been given to the Medical Department of Washington University through the generosity of a friend of the institution. The library is now on the way to this country and will be catalogued. It contains about 2,500 titles and is varied enough to form a valuable nucleus for a library of medical history.

St. Louis

Infectious Hospital Site Not Approved.—The St. Louis Medical Society adopted resolutions endorsing the location of the proposed city infectious hospital as advocated by the Hospital Board, but the bill was defeated three days later in the City Council, 13 to 8.

Division of Diagnostics.—The newly created division of diagnostics of the Health Department has been filled by the following appointments: chief diagnostician, Dr. M. C. Woodruff, and assistant diagnosticians, Drs. J. A. Smith, S. W. Hauck, W. S. Lawrence, C. L. LaBarge, M. P. Morrell, Henry C. Lloyd, J. S. Pope, R. W. Wills, J. O. Farrar and Victor A. Carriere.

Personal.—Dr. A. S. Barnes, Jr., E. Lee Dorsett and Frank Hinchey have been appointed by the St. Louis Medical Society a permanent Red Cross Committee to cooperate with the American National Red Cross.——Dr. L. S. Luton has been elected chairman; Dr. O. H. Brown, vice-chairman; Dr. H. W. Loeb, secretary, and Dr. G. Gellhorn, treasurer of the medical staff of the St. Louis City Hospital.

NEBRASKA

Personal.—Dr. M. W. Baxter, recently appointed superintendent of the Ingleside State Hospital has been seriously ill with gastritis.——Dr. Claude Watson, Nebraska City, has been appointed physician to the State Institute for the Blind.——Dr. W. H. Crutcher, Palmer, has been selected as first assistant physician and Dr. C. W. Chariton, Moorestield, second assistant physician to the Ingleside Hospital.

NEW JERSEY

In Memoriam.—A memorial tablet to the late Dr. Charles J. Kipp, Newark, was unveiled in the Eye and Ear Infirmary, Central Avenue, Newark, recently. The bronze tablet bears a portrait medallion of Dr. Kipp and an inscription setting forth his services to the infirmary as founder and executive surgeon.

Personal.—Dr. Edgar B. Funkhouser, Trenton, is spending the winter in Munich, Germany.——Dr. J. Boyd Risk and family, Summit, are spending the winter in Bermuda.——Dr. Martin W. Reddan, Trenton, fractured his leg while attempting to crank his automobile, recently.——Dr. William C. Sandy, Jr., assistant physician at the Trenton State Hospital, has resigned.

Hospital Notes.—Plans for a new children's ward for Mercer Hospital, Trenton, are under construction and it is probable that work will be commenced in the early spring. The new wing will be added to the eastern end of the building and will cost about $12,000.——A committee of business men, clergymen and physicians met in Jersey City, February 14, and formulated the plans for raising $10,000 to furnish the new German Hospital which has recently been completed at Boulevard and Warner Avenues at a cost of $20,000. The institution has accommodation for about fifty patients.

NEW YORK

Legislature Gets Recommendations of Health Commission.—Governor Sulzer has sent a message to the legislature embodying the recommendations advised by the special commission appointed to investigate health conditions in this state. Among the recommendations made are the abolition of town and village boards of health and the substitution of a state system of sanitary supervision; fixing the term of the State Commissioner of Health at six years and his salary at $10,000 instead of $5,000 as at present; that he must be either a physician or a recognized authority on public health work and should not be permitted to practice medicine or have any other occupation. It is advised that there be created a State Public Health Council of seven members, including the Commissioner of Health, Commissioner of Labor, one commissioner or other health officer of a city of the first or second class, and three members to be appointed by the governor. This council should have authority to adopt public health regulations, but should not have executive, administrative, or appointive powers. The State Commissioner should exercise supervision over local health authorities and be charged with the enforcement of public health laws. The state should be divided into at least twenty sanitary districts with an expert supervisor in each district. Local officers should be charged with continuous supervision of their districts, examination of school children, inspection of schools and other public places, popular education as to public health and with securing full registration of births and deaths. There are also suggestions in regard to child hygiene, working conditions, registration of vital statistics, etc.

New York City

Laboratory for Experimental Surgery.—A laboratory for experimental surgery has just been opened at the Flower Hospital. Special courses in surgery are offered to the medical profession. Dr. A. L. Soresi has been appointed professor of experimental surgery and director of the laboratory.

Harvey Society Lectures for March.—The Harvey Society announces the following schedule of lectures for March: March 8, Prof. Edward G. Conklin, Princeton University, "The Size of Organisms and Their Constituent Parts in Relation to Longevity, Senescence and Rejuvenescence;" March 22, Prof. Franz Knoop, University of Freiburg, Germany, "Modern Problems of Nutrition," and March 29, Prof. John Howland, Johns Hopkins University, "The Scientific Basis for the Artificial Feeding of Infants."

Personal.—Dr. I. Epstein, in responding to an ambulance call from the Lebanon Hospital, received severe injuries in a collision, and is reported to be in a precarious condition.——Dr. John H. Huddleston has been appointed manager of the Tuberculosis Hospital at Ray Brook.——Dr. Stephen Smith celebrated the ninetieth anniversary of his birth on February 20.——Dr. José M. Delgado, U. S. P. H. S., Brooklyn, recently underwent an operation at St. Luke's Hospital and his condition, though serious, is said to be encouraging.——Dr. R. Melville Cramer sailed for Europe on February 22.——Dr. Samuel Milbank, instructor of applied pharmacology in the Cornell College of Medicine has resigned; Dr. C. C. Barrows has been made professor of gynecology.——A reception was given by the Manhattan Medical Society, February 28, to Dr. Jacques Loeb of the Rockefeller Institute at which he spoke on "Some Recent Experiments in Artificial Parthenogenesis."

Semi-Centennial of Obstetric Society.—On February 14 the New York Obstetric Society celebrated the fiftieth anniversary of its founding by a dinner, at which about ninety were present. Dr. George G. Ward, Jr., acted as toastmaster. There were present as guests of the society: Drs. Abraham Jacobi, New York City; Matthew D. Mann, Buffalo; E. P. Davis, Philadelphia; Edward Reynolds, Boston; Frank F. Simpson, Pittsburgh; G. M. Boyd, Philadelphia; William M. Sprigg, Washington, and Albert M. Judd, Brooklyn. Portraits of Dr. Thomas Cook, the first president of the society; Drs. J. Marion Sims, Edward E. Peaslee, T. Addis Emmet, J. Gaillard Thomas, William C. Lusk, Alexander J. C. Skene, Emil Noeggerath, Paul F. Munde and Josiah Knox were shown on the screen and were responded to by members of the society. A brief history of the society was given by Drs. J. Riddle Goffe and Dr. William S. Stone. Addresses were also made by Drs. E. W. Davis, Edward Reynolds, J. Whitridge Williams and Abraham Jacobi.

OKLAHOMA

Personal.—Dr. A. B. Leeds, Chickasha, has been appointed grand medical examiner of the A. O. U. W. of the state.——Dr. J. D. Ballard, Oklahoma City, has resigned as assistant state examiner and inspector.——Dr. William J. Jolly has succeeded Dr. Robert F. Williams, Jr., as dean of the faculty of the Medical Department of Oklahoma University, Oklahoma City.——Dr. O. C. Coppedge, Bristow, has been appointed health officer of Creek County.

New Officers.—Seventh Councilor District Medical Society at Muskogee: president, Dr. W. A. Tolleson, Eufaula; secretary-treasurer, Dr. A. B. Montgomery, Muskogee.——Logan County Medical Society at Guthrie: president, Dr. Fred Y. Cronk; secretary-treasurer, Dr. J. Lewis Day, both of Guthrie.——Central Oklahoma Medical Society at Enid: president, Dr. T. M. Aderhold, El Reno; secretary-treasurer, Dr. J. M. Cooper, Enid. El Reno was selected as the next place of meeting.

OREGON

Physicians' Building for Portland.—A twelve- tory building which is being erected in Portland, for the exclusive use of physicians and dentists, is almost completed and will be ready for occupancy in the spring.

Honor Senator-Elect.—Dr. Harry Lane, Portland, United States senator-elect from Oregon, was given a banquet by members of the Portland Medical Society, February 6, at which eloquent tributes were paid to the worth of Dr. Lane as a citizen, a physician and a public official. Dr. W. T. Williamson presided as toastmaster.

PENNSYLVANIA

Sanatorium Site Selected.—The City Council of Pittsburgh on February 17 voted to erect a municipal tuberculosis hospital on the Leech Farm, an addition to Highland Park.

Personal.—Dr. P. Y. Eisenberg was recently elected president of the Norristown Charity Hospital Association.——Dr. Victor S. Messinger was elected president and Dr. W. Gilbert Tillman, secretary, at a recent meeting of the Physicians' Protective Association of Easton.——Dr. J. W. Ellenberger, Harrisburg, has returned from Europe.——Dr. Olin K. McGarrah, Altoona, was thrown from his automobile on an icy pavement, but escaped with a few bruises.

Philadelphia

Resolutions on Death of Dr. Steinbach.—The faculty of the Philadelphia Policlinic on February 17 adopted resolutions setting forth the notable services of Dr. Lewis W. Steinbach who was "a skilled and learned surgeon and ophthalmologist and successful internist and in addition possessed exceptional personal characteristics, standing for good morals, highest ideals and the soundest of personal and professional ethics."

Personal.—Dr. William R. Nicholson has been appointed visiting gynecologist to the Methodist Episcopal Hospital.——Dr. Matthew Woods has been elected president of the Philadelphia Society of Arts and Letters.——Dr. J. Solis-Cohen was the guest of honor at the banquet of the Mount Sinai Hospital Alumni Association, New York, February 22.——Dr. S. Weir Mitchell, Philadelphia, celebrated his eighty-fourth birthday on Saturday, February 15.——Dr. L. J. Hammond, retiring president of the Philadelphia County Medical Society was presented with a gold-mounted gavel by members of the society, February 12.——A silver loving-cup was presented to Dr. John B. Deaver, February 14, at a meeting of the John B. Deaver Surgical Society on the occasion of its fifteenth anniversary.

University Day.—Gov. Phillips Lee Goldsborough of Maryland, delivered the annual oration on University Day, February 22. A portrait of Dr. DeForest Willard, by William Chase, was presented by Dr. Gwilym G. Davis, and was accepted by Provost Edgar Fahs Smith on behalf of the board of trustees. Immediately after the exercises, the provost and the trustees entertained the special guests at luncheon and in the afternoon the annual University Day Tea was held. In the evening the twenty-first annual dinner and smoker of the Philadelphia Alumni Society of the University Medical Department was held and was attended by more than six hundred. The sum of $500 was voted for the establishment of a scholarship at the University Medical School, to be known as the Roland G. Curtin scholarship, in honor of Dr. Roland G. Curtin, who is now seriously ill. According to the provisions of the resolution, additional sums will be added to the original $500 each year until the total is sufficient to support the scholarship. At the annual election of the society Dr. Clarence P. Franklin was elected president, and Dr. William S. Wray, recording secretary.

UTAH

Personal.—Dr. C. C. Snyder has been appointed physician, Dr. W. N. Pugh, assistant physician, and Dr. E. F. Chamberlain, pathologist, of Salt Lake County.

Fire in Sanatorium.—The Ogden Sanatorium, three miles east of Ogden, was completely destroyed by fire, February 12, with a loss estimated from $30,000 to $40,000 partially covered by insurance. The building is owned by the Ogden Mineral Springs Company.

New Officers.—Uintah County Medical Association at Vernal, February 6: president, Dr. George H. Christy; secretary-treasurer, Dr. Homer E. Rich, both of Vernal.——Weber County Medical Association at Ogden: president, Dr. A. A. Robinson; secretary-treasurer, Dr. Carlyle K. McMurdy, both of Ogden.

VIRGINIA

Personal.—Dr. St. Julian Oppenhimer has been elected police surgeon of Richmond.——Dr. R. D. Wolfe has been elected medical superintendent of the Norfolk Protestant Hospital.——Dr. Julian M. Robinson has been elected city physician of Danville and Dr. W. E. Jennings has been made a member of the local board of health.

Visitors Appointed.—Governor Mann has appointed the nineteen members of the board of visitors to direct the affairs of the Medical College of Virginia which recently entered into a merger with the University College of Medicine. The visitors designated by the Medical College of Virginia are: Drs. T. H. Barnes, Suffolk; G. F. Bowie, Fredericksburg; J. B. Fisher, Midlothian; William L. Harris, Norfolk, and H. S. Myers, Forks of Buffalo, and Messrs. E. L. Bemis, Richmond; C. P. Cardwell, Hanover; John S. Harwood, Richmond, and J. D. Johnstown, Roanoke. Those designated by the University College of Medicine are: Drs. Paulus A. Irving, Farmville; and Robert C. Randolph, Boyce, and Messrs. George L. Christian, L. Z. Morris, E. D. Taylor, H. L. Cobell, Thomas L. Moore, William R. Miller and John Johnson, Alexandria; and the appointment of Mr. Eppa Hunton, *Jr.*, was mutually agreed on by both institutions.

WASHINGTON

State Board Meeting.—At the annual meeting of the State Board of Health held in Olympia, it was voted to adopt regulations regarding the sanitary conditions of railroad cars, and the proposed laws to protect the water-supply of municipalities were discussed.

New Officers.—Spokane County Medical Society at Spokane: president, Dr. E. B. Nelson; secretary, Dr. Carl H. Weisman, both of Spokane.——Pierce County Medical Society at Tacoma: president, Dr. C. S. Wilson; secretary, Dr. O. E. Sutton, both of Tacoma.——Yakima County Medical Society at North Yakima: president, Dr. R. S. Weyer; secretary, Dr. H. H. Skinner, both of North Yakima.——King County Medical Society at Seattle: president, Dr. J. C. Moore; secretary-treasurer, Dr. Henry D. Brown, both of Seattle.

Personal.—Dr. Frank Hinman, city bacteriologist of Spokane has been appointed assistant to Dr. Hugh H. Young on the surgical staff of Johns Hopkins Hospital.——Dr. Willis H. Corson, formerly superintendent of the King County Hospital at Seattle, has been appointed assistant county health officer and will be in charge of the southern half of the county, Health Officer Sparling taking charge of the northern section.——Drs. J. R. Yocom, Tacoma; H. M. McLaughlin, Seattle; W. C. Cox, Everett; A. L. MacLennan, Raymond, and F. W. Anderson, Tacoma, have been appointed examining physicians of the Industrial Insurance Commission on recommendation of Dr. J. W. Mowell, Olympia, chief physician.——Dr. E. J. McCausland has been elected president of the State Board of Health and Dr. E. R. Kelly, Seattle, has been elected secretary.——Dr. J. M. Semple, for four years superintendent of the Medical Lake State Hospital, is reported to have resigned.

GENERAL

New Officers.—Tri-State Medical Society of Virginia and the Carolinas, at Norfolk, February 20-21: president, Dr. Southgate Leigh, Norfolk; vice-presidents, for Virginia, Dr. Stephen Harnsburger, Catlett; for North Carolina, Dr. E. Reid Russell, Asheville; for South Carolina, Dr. J. H. Taylor, Columbia, and secretary, Dr. Rolfe E. Hughes, Laurens, S. C.——Fox River Valley Medical Society, at Green Bay, February 18: president, Dr. F. Gregory Connell, Oshkosh; secretary, Dr. R. H. Sweetman, Green Bay.

Infectious Diseases.—The infectious diseases, including smallpox, scarlet fever, measles and whooping-cough, have continued to be prevalent throughout the United States, particularly east of the Rocky Mountains, throughout February, but with considerable abatement as compared with January. In many cases the schools have been closed for brief periods. In no instance has any of these diseases assumed the form of a serious epidemic and the local authorities, by vigorous measures, have been able to control the situation. In Philadelphia, however, from 600 to 800 cases of measles have occurred each week during the month. Philadelphia and Baltimore in the East and Berkeley, Cal., in the West, have been centers of small-pox. At Fort Wayne, Ind., 28 cases broke out in the State Institution for the Feeble-Minded and at Evansville, Ind., a small epidemic occurred, which caused the authorities to close the schools. Considerable opposition arose to the orders of the health board excluding children from the schools who were not vaccinated and the matter was taken to the courts. Parochial schools refused to comply with the regulations of the board and they were closed by the police. In a decision refusing to sustain the demurrer of the antivaccinationists to the answer of the city to the complaint filed against the health board the local court held that the power of the health board to require vaccination was probably questionable but that the board had undoubted authority to determine whether an epidemic existed. Opposition to vaccination in Philadelphia and Baltimore flattened out and vaccination was vigorously enforced in the epidemic area. In Berkeley, Cal., the seat of California University, considerable opposition developed from the antivaccinationsts, who seemed to be supported by the League for Medical Freedom. Berkeley is one of the strongholds of the league. As an argument against vaccination, one of the papers supporting the antivaccinationists stated that in the pure air and sunshine of California no

epidemic diseases could exist; but that did not prevent the city from having a large number of cases of small-pox. The meningitis situation in the South is much improved, nothing resembling an epidemic being present in any locality. There are a few cases, however, in several of the Southern states.

PARIS LETTER

(From Our Regular Correspondent)

PARIS, Feb. 7, 1913.

International Saccharin Conference

The opening session of the international conference for regulating the use of saccharin and like substances took place in Paris, February 3, under the presidency of Dr. F. Bordas, head of the laboratories of the treasury department. This conference will consider anew the plan agreed on at the first international conference assembled for this purpose in 1909. The present conference will be participated in by representatives of Germany, Austria-Hungary, Belgium, France, Greece, Holland, Italy, Portugal, Russia and Switzerland.

Treatment of Pregnant Syphilitic Women by Salvarsan

At a recent meeting of the Société médicale des hôpitaux de Paris, Dr. Jeanselme read an interesting paper on this subject. In the past two years all pregnant syphilitic women in his service have been given intravenous injections of salvarsan in doses of 0.2, 0.3 and 0.4 gm. From four to six injections were given in each case, and were renewed from week to week. Fourteen women who presented signs of recent and active syphilis during their pregnancy were treated by this method. All were delivered at term of living infants, which were as a rule of normal weight. No signs of hereditary syphilis were found in any of these infants. While four died shortly after birth, death was caused by accident. Two women with cases of syphilis of long standing, who had formerly had numerous miscarriages, stood their pregnancy well. Dr. Jeanselme concludes that salvarsan has no unfavorable effect in pregnancy, and even exercises a favorable influence.

The Abuse of Narcotics

Owing to poisoning by cocain and morphin, of which I have already written (THE JOURNAL, Jan. 25, 1913, p. 298), the public prosecutor has instructed police officers in the Department of the Seine to enforce all the regulations concerning the sale of poisonous substances. Each time that a police officer is called in cases of violent death, wounds or illnesses which appear to have been provoked by the abuse of morphin, cocain, opium or other poisonous substance, he is to take pains to ascertain by whom and in what shape the poisons were sold. Officers are reminded that they have the authority to enter places where these drugs are sold, provided that they are accompanied by a physician or a chemist named by the prefect of police.

BERLIN LETTER

(From Our Regular Correspondent)

BERLIN, Feb. 7, 1913.

Friedmann's Treatment of Tuberculosis

My criticisms of two weeks ago on the Friedmann treatment of tuberculosis have received a gratifying endorsement in a statement of Bier, director of the Berlin surgical clinic, at the last meeting of the Berlin Medical Society. Heretofore Bier had continually been receiving inquiries from foreign countries, especially America and Spain, whether or not the new remedy is really so effective as he was alleged to have publicly stated, according to the newspapers of the respective countries. Finally last week a military officer from Huelva brought his tuberculous daughter to Bier. They came as a result of a report in the *Diario de Huelva*, which was much more encouraging than the exceedingly non-committal remarks of Bier had warranted. Bier searched in vain in the *Diario de Huelva* for any of the weighty objections which were expressed in connection with that discussion by some of the most prominent physicians.

It is apparent, therefore, that if this remedy should not prove effective, which has been the experience in many previous similar instances, the result will be a considerable injury to the reputation of German medical science and the medical profession, as it was announced everywhere in the foreign press, without contradiction, that the most prominent German medical society, the Berliner medizinische Gesellschaft, consisting of well-known Berlin physicians, had endorsed the remedy.

Bier concluded as follows: "I must therefore publicly protest against the misuse of my name for the recommendation of a remedy of whose effectiveness I have so far no evidence. I hope that this statement may find its way into the foreign press as quickly and as widely as my alleged recommendation of the treatment. It should also relieve me of the burden of constantly answering letters and stating that I have seen as yet no evidence of any unusual curative action of Friedmann's treatment."

Three Conferences on Infant Welfare

Last week three successive meetings on the care of infants were held in Berlin. A commission chosen by the department of the interior to consider the training of nurses for infants, held its meeting, January 29, in the Kaiserin Augusta Victoria Institution for the Reduction of Infant Mortality in the German Empire, for the purpose of establishing a uniform standard for such training. The speakers were Langstein of Berlin and Ibrahim of Munich.

TRAINING OF NURSES FOR INFANTS

The following resolutions were adopted: 1. It is necessary to make a distinction between the training of nurses for sick infants and nursemaids tending healthy children in a family. 2. The length of time for the training of nurses for the care of sick infants is set at two years. At least one of these two years must be devoted to the care of infants and children. 3. The training shall be completed by an examination which is to be passed in one of the public institutions. After this the nurse is granted a state diploma, which is issued on the basis of her previous training in the general care of the sick. The length of training required by the state for this purpose is one year, but it can be limited, under certain circumstances, to six months. 4. The training and examination in the care of infants may be carried on only by institutions for infants, children's hospitals or children's wards where the care of infants is in accordance with the most modern ideas and which are under the direction of a specialist. Children's hospitals with appropriate material (older children, surgical wards) are also entitled to give the training in the general care of the sick. 5. In granting the diploma, not the time spent by the applicant in the practical care of infants, but the time devoted to training and also the institutions in which she received her training should be considered. In case of doubt, a proof as to ability must be furnished by an examination in one of the approved institutions. 6. Uniform regulations shall be adopted for the training of nursemaids of healthy children. This training, which requires at least six months, may be carried on only in those homes for infants, children's hospitals or wards which employ the most advanced, modern ideas in the care of infants, and which are under the supervision of a pediatrist, and are approved by a commission appointed by the German League for Infant Welfare. The training is to be concluded by an examination in one of these institutions. 7. A commission shall be appointed for the purpose of outlining a uniform system of training.

DAY NURSERIES

In the same place next day this was followed by another large meeting of delegates from all over Germany representing societies which maintain day nurseries. Dr. Boehm of Frankfort-on-the-Main and Dr. Rott of Berlin discussed the development of the crèche societies, whose functions are continually growing in importance in view of the growth of the cities, the increasing numbers of women wage-earners and the diminishing birth-rate. The speakers emphasized that the day nursery system should be fostered and extended.

The next task is to make the day nurseries conform to the requirements of the modern care of infants, which often is not the case, partly on account of ignorance, partly as a result of inadequate means. It was therefore decided to organize a league of the German day nursery societies, whose aim will be to unite existing societies, organize new societies, and endeavor with advice and example to improve conditions generally. This league is to be combined with the German League for Infant Welfare. It is to be known as the Deutscher Krippenverband.

The third meeting was a regular session of the members of the Prussian Central Association for the Protection of Infants, the Landeszentrale für Säuglingsschutz. After the annual and financial reports were attended to, the preparations for the second Landeskonferenz, which will be held March 26 this year, were discussed. This meeting will take place in the great hall of the upper house. Reports will be presented on the importance of aiding nursing mothers and on the system of giving premiums to promote breast-nursing, and on systematized welfare work for small children.

Association News

THE MINNEAPOLIS SESSION

Meetirgs in University of Minnesota Buildings—Entertainments at Club-Houses on the Lakes

At the Minneapolis session, the section meetings are to be held on the university campus in the various buildings of the University of Minnesota. The campus is located between Minneapolis and St. Paul on the river bank in a restful spot away from the dust and dirt of the cities. Several street-car lines running between Minneapolis and St. Paul pass through or near the campus. Therefore the hotels of both cities may be utilized.

This location is an especially advantageous place for a meeting because of the many halls which are so arranged that they can be supplied with lanterns, microscopes, etc. To avoid the necessity of returning to the hotel at noon, luncheon will be served in the buildings on the campus. It is planned to hold the section entertainments at the various country clubs situated on the lakes around the Twin Cities. The local Committee on Arrangements is making special effort to feature the Scientific Exhibit, and the new anatomic building of the Medical Department of the University of Minnesota is to be used for this display.

THE TRUSTEES' MEETING

Elections by the Board of Trustees

At the regular meeting of the Board of Trustees of the American Medical Association, February 21, Dr. George Dock, St. Louis, was reelected as a member of the editorial board of the *Archives of Internal Medicine*.

Dr. L. E. Holt, New York, was elected for one year to succeed Dr. Abraham Jacobi of New York, resigned, on the the editorial board of the *American Journal of Diseases of Children*.

Drs. J. A. Capps, Chicago; David L. Edsall, Boston, and R. A. Hatcher, New York, were reelected as members of the Council on Pharmacy and Chemistry.

Marriages

NAAMAN J. KARAGULLA, R.A.M.C., Mardin, Asiatic Turkey, to Miss Stella Emily Toal, at Baltimore, February 3.

CHARLES R. CASTLEN, M.D., M. C., U. S. Army, to Miss Lura Marega Galbraith of Seattle, Wash., January 20.

LUCIUS L. HOPWOOD, M.D., M. C., U. S. Army, to Miss Audentia Hansen at Alameda, Cal., February 4.

DANA CECIL POST, M.D., U. S. Navy, to Miss Helen McEwen Dick of Washington, D. C., February 6.

ARTHUR JOSEPH BEDELL, M.D., Albany, N. Y., to Miss Bessie Wilson of New York City, February 12.

DAVID POLLOCK MCCUNE, M.D., to Miss Lena Frances Walker, both of McKeesport, Pa., January 2.

ARTHUR MITCHELL GREGG, M.D., to Miss Myra Ryland Grigg, both of Joplin, Mo., February 10.

EDWIN COBB, M.D., Iowa City, Iowa, to Miss Mildred Brown of Manchester, Iowa, February 8.

ADOLPH HERMAN NAHMAN, M.D., to Miss Anna Ascher, both of San Francisco, May 5, 1912.

PHILIP REXFORD WAUGHOP, M.D., to Miss Nellie Kloss, both of Seattle, Wash., February 4.

ARTHUR JOHN LIGHT, M.D., to Miss Mathilda M. Eichenhorse, both of Cincinnati, recently.

Efficacy of So-Called Remedies for a Disease in Inverse Proportion to Their Number.—You may take it as a rule that when an enormous number of remedies are recommended for any disease we do not know what the remedy really is.—W. Hale White in *Clin. Jour.*

Deaths

Flavius Josephus Van Vorhis, M.D. Rush Medical College, 1866; of Indianapolis; assistant surgeon of Volunteers during the Civil War; a graduate in law of 1880 and a state senator from 1881 to 1883; a pioneer in health legislation; who drafted and secured the passage of the law creating the first state board of health; died in the Methodist Episcopal Hospital, Indianapolis, February 9, three weeks after an operation for the removal of gall-stones, aged 72.

Samuel Whitfield Hartt, M.D. College of Physicians and Surgeons, Baltimore, 1889; formerly a member of the Duquesne County (Pa.) School Board; later a member of the Port Angeles (Wash.) School Board; and thereafter chief of staff in the surgical department of the Denver County Hospital for two years; died at his home in Seattle, February 5, from pleurisy complicating pneumonia, aged 47.

Henry Ellsworth Locher, M.D. Long Island College Hospital, Brooklyn, 1877; formerly professor of therapeutics in Grand Rapids (Mich.) Medical College and of chemistry in the Grand Rapids Veterinary College; president of the Board of Health of Grand Rapids; a member of the school board for eighteen years and for two terms its president; coroner of Kent County from 1880 to 1888; died at his home in Grand Rapids, February 9, from nephritis, aged 62.

Charles O'Neil Dunlap, M.D. Columbus (Ohio) Medical College, 1878; a member of the Ohio State Medical Association; for many years secretary of the Vinton County Medical Society; first assistant physician at the Athens State Hospital from 1886 to 1891 and superintendent of the institution from 1891 to 1896; died at his home in McArthur, February 13, from interstitial nephritis, aged 56.

James Reagles, M.D. Bellevue Hospital Medical College, 1864; captain, M. C., U. S. A., retired; assistant surgeon of the Sixty-Second Volunteer Infantry during the Civil War; in 1872 a member of the United States Geological Survey; who served in Porto Rico during the Spanish-American War; died at his home in Schenectady, N. Y., February 10, from pneumonia, aged 71.

Josephus Robert Lemen, M.D. Missouri Medical College, St. Louis, 1875; formerly professor of diseases of the chest in St. Louis University; consulting physician and chief-of-staff of Deaconess Hospital and consulting physician to the Rebekah Hospital, St. Louis; at one time a member of the St. Louis Board of Health; died at his home, February 15, from heart disease, aged 59.

John A. Barry (license, ten years of practice, Michigan, 1900); a member of the Michigan State Medical Society; a member of the State Legislature from 1906 to 1908; for ten years chairman of the Wexford County board of supervisors; superintendent of the poor and president of the village of Harriette; died at his home, February 9, from cerebral hemorrhage, aged 64.

Benjamin Cheever, M.D. New York University, New York City, 1891; city physician of Portsmouth, N. H., and health officer of Rockingham County from 1893 to 1895; died at his home in Portsmouth, February 14, from the effects of a gunshot wound, self-inflicted, it is believed with suicidal intent, while mentally unbalanced on account of an attack of influenza, aged 43.

George H. Witter, M.D. College of Physicians and Surgeons, Baltimore, Md., 1885; a member of the American Medical Association; state senator from the forty-fourth district of New York State from 1908-1910 and state committeeman for six years; died at his home in Wellsville, February 13, aged 54.

John S. Potts, M.D. American Medical College, Eclectic, St. Louis, 1875; College of Physicians and Surgeons, Keokuk, Iowa, 1877; a member of the Medical Society of the State of California; for fifteen years a practitioner of San Francisco; died in Los Angeles, February 9, from nephritis, aged 72.

Adolph O. Bjelland, M.D. University of Minnesota, Minneapolis, 1896; a member of the American Medical Association; formerly health officer of Mankato, Minn.; local surgeon for the Chicago and Northwestern System; died at his home in Mankato, February 14, from pneumonia, aged 42.

John Eberle Chitwood, M.D. Cincinnati College of Medicine and Surgery, 1864; assistant surgeon of the Thirteenth Indiana Volunteer Cavalry during the Civil War; until 1909 a practitioner of Connersville, Ind.; died at his home in Indianapolis, February 8, from heart disease, aged 68.

George Clinton Jeffrey, M.D. Pulte Medical College, Cincinnati, 1875; for eighteen years attending surgeon and later consulting surgeon to the Cumberland Street Hospital, Brooklyn; surgeon to the Memorial and Prospect Heights hospitals; for a time surgeon of the Jamaica Hospital and surgeon to the Brooklyn and Queens County Suburban Railway; died at his home in Brooklyn, February 11, from heart disease, aged 61.

Julius Silberstein, M.D. St. Louis College of Physicians and Surgeons, 1891; a member of the American Medical Association; for twenty years a member of the United States Indian Service; a veteran of the Austrian-Turkish War and of the Indian campaign against the Lame Deer Band in 1886; died at his home in Sacaton, Ariz., January 16, aged 53.

Hamilton Kemp Derr, M.D. University of Maryland, Baltimore, 1881; a member of the American Medical Association; for twelve years treasurer of the Washington County Medical Association; local surgeon at Hagerstown for the Western Maryland Railroad; died at his home, February 5, from heart disease, aged 60.

James Alan Neville, M.D. George Washington University, Washington, D. C., 1910; formerly an intern in the United States Marine Hospital, Chicago; superintendent of the Iroquois Memorial Hospital, Chicago; died in that institution, February 20, from pneumonia, aged 28.

Joseph T. Coveny, M.D. College of Physicians and Surgeons, St. Joseph, Mo., 1882; at one time assistant superintendent of Buchanan County Insane Hospital, St. Joseph; for fourteen years a practitioner of Oskaloosa, Iowa; died at his home, February 5, from bronchitis, aged 53.

Arthur Bascom Loving, M.D. University of Louisville, Ky., 1874; a member of the Arkansas Medical Society; a Confederate veteran; for several years physician of Jefferson County; died at his home in Pine Bluff, February 13, from diabetes, aged 68.

George William Carrington, M.D. University of Virginia, Charlottesville, 1859; New York University, New York City, 1861; a surgeon in the Confederate service throughout the Civil War; died at his home in Richmond, Va., February 4, aged 74.

Maria S. Gilmore Pontius, M.D. Columbus (Ohio) Medical College, 1883; a member of the American Medical Association; died at her home in Canton, Ohio, from the result of injuries received in an automobile accident nearly two years before, aged 55.

A. S. Simmons, M.D. Graffenberg Institute, Dadeville, Ala., 1861; of Grand Saline; a practitioner of Texas since 1870; formerly vice-president of the First National Bank of Wetherford; died in a sanatorium in Fort Worth, February 14, aged 76.

Samuel Souders, M.D. Bellevue Hospital Medical College, 1871; a member of the Ohio State Medical Association; and a practitioner for more than half a century; died at his home in Beavertown, Ohio, February 9, from senile debility, aged 82.

Hiram G. Nelson, M.D. Cincinnati College of Medicine and Surgery, 1864; for many years a practitioner of Jennings County, Ind.; died at the State Foresters' Home, Greenburg, February 6, from cerebral hemorrhage, aged 74.

Manuel Garcia Monteiro, M.D. College of Physicians and Surgeons, Boston, 1890; formerly a prominent Portuguese practitioner of New Bedford, Mass.; died at his home in Cambridge, February 7, from pneumonia, aged 54.

Mason S. Seymour, M.D. Vermont Medical College, Woodstock, 185—; for many years a practitioner of Waterbury, Conn., and Flushing, L. I.; died in the Flushing Hospital, February 5, from senile debility, aged 85.

William Foster Ganster, M.D. Long Island College Hospital, Brooklyn, 1896; a member of the American Medical Association; died at his home in Brooklyn, February 11, from the effects of a nervous breakdown, aged 47.

James Atwood Tabor, M.D. Eclectic Medical Institute, Cincinnati, 1879; Boston University School of Medicine, 1883; formerly of Lawrence, Mass., and later of Corinna, Maine; died in Bangor, February 13, aged 54.

John McClellan Lacy, M.D. University of Nashville, Tenn., 1861; a pioneer practitioner of Santa Ana, Cal.; surgeon in the Confederate Service during the Civil War; died at his home in Santa Ana, February 3, aged 75.

Kimmel Rauch, M.D. Eclectic Medical Institute, Cincinnati, 1899; of Johnstown, Pa.; died in the Johnstown City Hospital, February 11, from gangrene of the intestine a week after an operation for appendicitis, aged 40.

Ebenezer L. McKinnie, M.D. College of Physicians and Surgeons, Keokuk, Iowa, 1880; of Colorado Springs; a member of the Colorado State Medical Society; physician of El Paso County for six years; died February 13, in Los Angeles, Cal., where he had gone on account of his health, aged 64.

James F. Duffy, M.D. University of Vermont, Burlington, 1891; of Providence, R. I.; a member of the American Medical Association; died in the Providence Hospital, February 8, from heart disease, aged 62.

William H. Campbell, M.D. Washington University, St. Louis, 1856; for more than half a century a practitioner of Missouri; died at his home in Kansas City, February 7, from senile debility, aged 83.

Elmer Ellsworth Moore, M.D. Dartmouth Medical School, Hanover, N. H., 1886; a member of the American Medical Association; died at his home in East Providence Center, R. I., January 30, aged 51.

William R. Hoch, M.D. University of Pennsylvania, Philadelphia, 1880; a Denver specialist on diseases of the throat, nose and ear; died at his home in that city, Dec. 7, 1912, aged 56.

Brookfield Gard, M.D. Eclectic Medical Institute, Cincinnati, 1865; one of the oldest practitioners of Fort Wayne, Ind.; died at his home, February 2, from cerebral hemorrhage, aged 80.

Edgar W. Smallwood, M.D. Jenner Medical College, Chicago, 1910; for eight years one of the staff photographers of the *Daily News*; died at his home in Chicago, February 18, aged 40.

Edward Lyman Washburn, M.D. Yale University, New Haven, Conn., 1865; for many years a druggist of New Haven; died at his home, February 10, from arteriosclerosis, aged 73.

Samuel H. Sturgeon, M.D. Medical College of Ohio, Cincinnati, 1873; died at his home in Akron, Ohio, February 11, from septicemia following a fracture of the toe, aged 64.

Horace Edwin Harmon, M.D. Sioux City (Iowa) College of Medicine, 1902; a practitioner since 1897; died at his home in Jeffers, Minn., February 2, from pneumonia, aged 39.

Calvin Wesley Smith, M.D. State University of Iowa, Iowa City, 1878; a member of the Iowa State Medical Society; died at his home in Muscatine, February 9, aged 67.

Joseph M. De Trana, M.D. Rush Medical College, 1892; of Chicago; died in the Presbyterian Hospital in that city, February 11, from hemorrhage into the pons, aged 46.

Ernest Ensign Banker, M.D. Cornell University, New York City, 1903; of Clermont, Fla.; died in a private hospital in Orlando, Fla., February 1, from typhoid, aged 32.

Isaac W. Douglass, M.D. Cincinnati College of Medicine and Surgery, 1864; a veteran of the Civil War; died at his home in Michigantown, Ind., about February 5.

Holman M. Freeman, M.D. Atlanta (Ga.) Medical College, 1876; died at his home near Carnesville, Ga., February 1, from cerebral hemorrhage, aged 60.

George A. Brown, M.D. University of Nashville, Tenn., 1855; died at his home near Mooresville, Tenn., about February 3, from senile debility, aged 84.

Amos Clyde Staley (license, Illinois, 1897); an experimental chemist of Chicago; died suddenly in his laboratory in that city, February 18, aged 43.

Rodney Y. Sheppard, M.D. University of Louisville, Ky., 1891; died at his home in Louisville, February 7, from nephritis, aged 46.

John Willett Pease, M.D. College of Physicians and Surgeons, Boston, 1906; died at his home in Cambridge, Mass., February 4, aged 35.

Thomas S. Lloyd, M.D. Medico-Chirurgical College of Philadelphia, 1901; died at his home in Shamokin, Pa., February 1, aged 34.

George B. Smith, M.D. Kansas City (Mo.) Medical College, 1880; of Brussels, Ill.; died in Los Angeles, Cal., February 7, aged 60.

Adam Mackay, M.D. University of Louisville, 1889; died in Wesley Hospital, February 11, from the effects of exposure, aged 63.

Daniel Curley Ross, M.D. Jefferson Medical College, 1907; died at his home in Ambridge, Pa., January 20, aged 30.

William Webb Underhill, M.D. Fort Worth (Tex.) University, 1898; died in Berkeley, Cal., January 4, aged 44.

James C. Frazier (license, Missouri, 1884); died in his office in Gallatin, February 11, from heart disease, aged 60.

The Propaganda for Reform

PA-PAY-ANS (BELL)

Baking Soda and Charcoal as a Panacea

Dr. W. W. Harper, Selma, Ala., received a postal card from Bell & Company (Inc.) extolling their nostrum, Pa-pay-ans (Bell). The card seems to have impressed Dr. Harper in a way that it ought to impress—but unfortunately does not—every intelligent physician. He writes in part:

To the Editor:—I enclose a postal card which I received some time since. Will you please have the Council on Pharmacy and Chemistry make an analysis of this wonderful (!) remedy that so speedily cures cases of indigestion! . . .

It is an insult to the intelligent members of the profession for Bell & Co. to send over their signature such slush as is written on the enclosed card.

I look on THE JOURNAL as a great exponent of what is right and high. THE JOURNAL is and has been foremost in denouncing unworthy, proprietary remedies, and I trust that you will continue to do so until they are driven out of the market.

Dr. Harper's indignation is a healthy sign. If the "slush" sent out by Bell had the same effect on all physicians, that firm would conduct a more reputable, if less profitable, business.

While we presume every physician in the country has received a similar card from the Bell concern, we reproduce it for the purpose of refreshing the memory. Here it is:

"Dear Doctor:—A prominent Tennessee physician, with an exceptionally large practice, writes:

"'As a Christmas gift to you, I want to say that of all remedies that I have used for acute Indigestion, I have found Pa-pay-ans Bell the best—and I will further state that in cases of almost immediate death following an onset of Indigestion—cases where we notice so many men of prominence dying—if their physicians had prescribed Pa-pay-ans Bell—six tablets in half glass hot water, instead of hypos or strychnin, with aromatic spirits of ammonia on the side, there would have been many men at work the following day instead of undergoing preparation by the undertaker for burial.'

"Yours very truly, "BELL & COMPANY (INC.)."

This advertisement is typical of those sent out by this company—that is, testimonials alleged to have been written by "prominent physicians" of various parts of the United States. The names of the physicians are not given. One doctor who received the Pa-pay-ans Bell testimonial-advertisement decided to call the bluff of Bell & Co. and wrote the concern asking the name of the "prominent Pennsylvania doctor" that Bell & Co. claimed had written the testimonial. This is all the satisfaction he received:

"We appreciate your little note requesting the name of the Pennsylvania physician whose statement we issued on blotter folders, but in fairness to the men who write us we must withhold their names. No one of any standing in the profession would allow us to publish his name. . . ."

We are glad that Bell & Co. still have a sufficiently high opinion of the medical profession to realize that no physician "of any standing" would allow them to publish his name in connection with a Pa-pay-ans Bell testimonial. And yet we are somewhat surprised that they hold such an opinion. For the ease with which Bell & Co. have been able to "put one over" on our profession must, we believe, have had a tendency to give that concern a very poor opinion of the intelligence of the average physician.

Dr. Harper wants us to make an analysis of Pa-pay-ans Bell. This was done more than three years ago and a rather complete report was issued by the Council on Pharmacy and Chemistry (THE JOURNAL, Aug. 14, 1909). In addition to the Council's report, somewhat extended editorial comments were made. The whole matter has been reprinted in the "Propaganda for Reform" book. In our previous exposé, the following facts were brought out:

First, the analysis showed that Pa-pay-ans Bell consisted essentially of sodium bicarbonate, charcoal and ginger sweetened with saccharin and flavored with oil of wintergreen.

Second, Bell and Co. were shown to be closely identified with another concern known as L. D. Johns Co., the president of the Bell concern being the president of the Johns company; the vice-president of Bell & Co. being secretary and treasurer of the Johns company, and the secretary of Bell & Co. being vice-president of the L. D. Johns Co.

The L. D. Johns Co. is one of those pseudomedical concerns that obtains its capital by selling stock to physicians who are not above going into that kind of business. It puts out two tablets: "Dr. Johns Digestive Tablets," which are apparently identical in composition with Pa-pay-ans Bell, and "Dr. Johns Tablets," a laxative pill whose composition apparently, is similar to Cas-car-ans Bell.

Pa-pay-ans Bell, the baking soda-charcoal-ginger tablet, is to be found advertised in these, among medical journals:

New York Medical Journal	*Woman's Medical Journal*
Massachusetts Medical Journal	*International Journal of Surgery*

THE UNITED DOCTORS

The History and Methods of a Fake Concern of Advertising Quack Specialists

In the past few years we have repeatedly exposed the monstrous deception and fraud practiced on the public by the "patent medicine" venders and the exploiters of "sure cures". The money wasted on these worthless nostrums amounts to many millions every year, but the harm they do the public can not be conjectured.

Another form of fraud which not only constitutes an enormous tax on the financial resources of the public but which also works an untold amount of harm to its health and welfare is that of the advertising quack whose cupidity, conscienceless and pretentiousness constitute a menace almost equal to that of the "patent medicine" business. This form of fraud is less well understood by the public, and it is the intention in this article to describe the characteristics and the methods of one type of these advertising frauds.

The quack has appropriated and practically converted into his exclusive property the name "specialist," which means much to the public. In addition he usually tacks on to the term some high-sounding or significant handle, which he believes will aid him in his plans; thus we have the "Great English Specialists," the "Battle Creek Specialists," the "German-American Specialists," "Associated Medical Specialists," "Union Specialists' Association," "United Specialists," "United Doctors, Specialists," etc., or such designations as "Associated Doctors," "Associated Doctors, Specialists," "Associated Specialists Co.," "German and English Specialists," "Oriental Doctors," "Cleveland Institute of Medicine and Surgery," "Original United Doctors," "Northwestern United Doctors," "Hot Springs Doctors," "Known Doctors," the "United Doctors," etc.

THE UNITED DOCTORS—WHAT THEY CLAIM TO BE

The United Doctors is an organization of quacks whose methods are somewhat different from those of the mail-order quack, on the one hand, and the itinerant "specialist" on the other. The United Doctors establish offices in towns of considerable size and remain there for varying periods of time, from a few weeks to a few months, claiming a new and wonderful system of treatment, which includes the good things from all the so-called "schools" of medicine, etc., and securing new victims by extensive advertising in the local newspapers[1]

1. Much of the matter describing the scheme of the United Doctors and a number of illustrations have been omitted from THE JOURNAL for lack of space. The complete matter, with additional illustrations, will be printed in a pamphlet, for sale at 4 cents each.

Like all medical fakers the United Doctors make free use of exaggerated or fraudulent testimonials alleged to have been written by grateful patients. They claim to be equipped with many wonderful instruments and appliances which are not known to the ordinary physician, and to possess a skill far beyond that of regular physicians in diagnosing and treating disease. For instance:

> We treat diseases of the Nerves, Blood, Skin, Heart, Liver, Stomach, Kidneys and Liver, including Rheumatism, Paralysis, Goitre, Constipation, Catarrh, Epilepsy, Indigestion, Dyspepsia, Weak Back, Bloating, Dropsy, Eczema, Scrofula, Diseases of Women and Diseases of Men.
>
> To prove to you that chronic diseases are our life study, and that we know the human body to the most minute detail, we will undertake to diagnose any case, in a few minutes, describing every ache and pain, without asking the patient a single question. To aid us in diagnosis we have instruments of our own, used by no other doctors.
>
> **UNITED DOCTORS**
> **CONSULTATION FREE**

WHAT THE UNITED DOCTORS REALLY ARE

"United Doctors" is a name for a business originated and owned practically by one man. It is not a professional organization but a business concern. The "great specialists" are professional renegades hired at a small salary, old and young, many of them with the most meager equipment, training and experience; others who have been failures in the regular practice or who, for various other reasons, have been induced to engage in this form of quackery.

How such men are obtained, these two advertisements, which appeared on different dates in a Chicago paper, will show:

> DOCTOR—GOOD CASE TAKER, FOR ADvertising office, registered in Iowa; give full description, experience, and state salary in first letter. United Doctors, Waterloo, Iowa.
>
> PHYSICIAN — FOR ADVERTISING OFfice; state salary and experience; must have Indiana registration. Address 8 H 39, Tribune.

It will be seen that the principal qualifications required are that the man be a good "case-taker"—in other words, a good salesman of fake medical services—and that he be registered in the state in which he is to be employed. The latter qualification is necessary in order to conform to the letter—not the spirit—of the state medical practice laws. On general principles it should not be difficult to estimate the value of the services of doctors procured by the advertising method; but of this more later.

METHODS OF ADVERTISING AND RUNNING THE OFFICES

When it is proposed by the United Doctors to open an office or "institute" in a town, a preliminary advertising campaign is conducted in the local newspapers. Except names and dates the advertisements are precisely the same in every place. First it is announced that two or three of their "directors" have visited the city and have decided that it would be a suitable place to open one of their permanent "institutes." These men are not directors at all but only hired men—really, advance press-agents. They try to impress the public with the great favor they are doing the community in establishing therein one of their offices. At first they always profess that it is their intention to buy ground with the object of building later. In a subsequent advertisement they announce that they have decided not to build until fall or spring, as the case may be, but have leased such and such a location and the offices will be open about such a date. In their advertisements they announce one or more postponements of the time of opening the office, one of which will always be on account of the non-arrival of furniture and equipment. The same claims and promises appear in all places and with great regularity. Finally the "opening day" comes. Following this the advertisements—in every town—state that the office was crowded all day, that people were turned away, that many prominent business men called and wished them success, etc. They advertise "free consultation" and "free treatment" for a short time, requiring their patrons to pay only for their medicines which, it is needless to say, are always charged for at enormous prices and the patient is duly impressed with the expense and difficulty of obtaining the medicine. In subsequent advertisements they tell of the great amount of business they are doing, and publish testimonials of supposed patients—these, usually are from other towns, seldom from the town in which the office is located. Of the character and value of some of these testimonials we shall have something to say later.

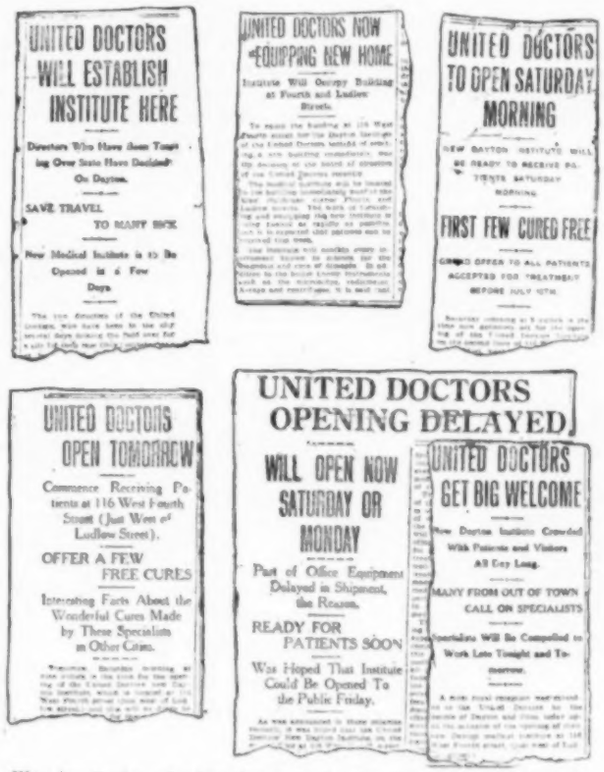
UNITED DOCTORS WILL ESTABLISH INSTITUTE HERE
Doctors Who Have Been Touring Over State Have Decided On Dayton.
SAVE TRAVEL TO MANY HERE
New Medical Institute is to Be Opened in a Few Days.
UNITED DOCTORS NOW EQUIPPING NEW HOME
Institute Will Occupy Building at Fourth and Ludlow Streets.
UNITED DOCTORS TO OPEN SATURDAY MORNING
NEW DAYTON INSTITUTE WILL BE READY TO RECEIVE PATIENTS SATURDAY MORNING.
FIRST FEW CURED FREE
SPECIAL OFFER TO ALL PATIENTS ACCEPTED FOR TREATMENT BEFORE JULY 10TH.
UNITED DOCTORS OPEN TOMORROW
Commence Receiving Patients at 116 West Fourth Street (Just West of Ludlow Street).
OFFER A FEW FREE CURES
Interesting Facts About the Wonderful Cures Made by These Specialists in Other Cities.
UNITED DOCTORS OPENING DELAYED
WILL OPEN NOW SATURDAY OR MONDAY
Part of Office Equipment Delayed in Shipment, the Reason.
READY FOR PATIENTS SOON
Was Hoped That Institute Could Be Opened To the Public Friday.
UNITED DOCTORS GET BIG WELCOME
New Dayton Institute Crowded With Patients and Visitors All Day Long.
MANY FROM OUT OF TOWN CALL ON SPECIALISTS
Specialists Will Be Compelled to Work Late Tonight and Tomorrow.

Fig. 1.—Series of advertisements in the form of reading notices inserted in the Dayton (Ohio) papers at the time of the opening of the "Institute" of the United Doctors in that city. Almost identical advertisements are used in every city where offices are opened, with the same delay and postponements on account of the non-arrival of furniture and equipment, and with the same "Big Welcome," etc. The same advertisements were used at Elmira, N. Y., where after a "Royal Reception" they closed the office inside of two weeks for lack of business.

To illustrate some of the points just mentioned the following extracts from their advertisements are given:

"Yesterday it was announced in these columns that the United Doctors had at last consented to establish one of their world-famous Medical Institutes in Muncie, and that it would be ready to receive patients soon."

"The board of directors have been looking about the city for some time for a suitable site upon which to erect a permanent home for the institution, but have at last postponed building until spring."

"Several fine suites of rooms have been leased on the second floor of the Little Block occupying the second floor of the building; this will be occupied by the Institute for the first year, or until a more suitable building can be purchased or erected for a permanent home for the institute."

WIDE EXTENT OF THIS CONCERN

Such then, is the plan of the United Doctors. They now have established about fifty offices or "institutes" spread over thirteen states. During the last six months of 1912 at least ten new offices were opened in as many cities. They extend from Fort Dodge, Iowa, and Fort Worth, Tex., on the west and south, to Trenton, N. J., and Atlanta, Ga., on the east. They are all owned or controlled (with a few exceptions which will be noted later) by one man who exercises general supervision

over the offices, writes practically all the advertising matter, contracts for insertion in the newspapers, rents the offices, buys the supplies and, most important of all, pockets the lion's share of the proceeds.

This man is Ben W. Kinsey, whose former headquarters were in Chicago. His history shows the evolution of the typical quack and should convince any one that medical services rendered under the circumstances here set forth and by a concern employing the methods of Kinsey could be nothing less than a swindle.

PERSONNEL OF THE UNITED DOCTORS

Ben W. Kinsey was born and reared at Mackinaw, Tazewell County, Ill. He was graduated by the Jenner Medical College (then a low-grade night-school), Chicago, in 1904, engaged in private practice for about a year, and then became a pupil and assistant of "Phenomenal" Kraus, a notorious quack who on account of his methods got into trouble with the federal and state authorities in Missouri and Ohio for misusing the mails and irregularity in practice, and was described as a "most shameless medical advertiser."

UNITED DOCTORS GET BIG WELCOME
NEW ATLANTA OFFICES WERE CROWDED WITH CALLERS ALL DAY LONG YESTERDAY
SPECIALISTS ARE KEPT BUSY
UNITED DOCTORS GET WELCOME
New Muncie Institute Crowded With Patients and Visitors All Day Long
UNITED DOCTORS GET BIG WELCOME
UNITED DOCTORS GET A BIG WELCOME
UNITED DOCTORS GET BIG WELCOME
UNITED DOCTORS GET BIG WELCOME
New St. Joseph Institute Was Crowded With Patients and Visitors Yesterday
UNITED DOCTORS GET BIG WELCOME
MANY OUT OF TOWN CALLERS

Fig. 2.—Collection of advertisements of the United Doctors showing their identfcal character in widely-separated states and cities.

HOT SPRINGS DOCTORS

Kinsey spent a few months with "Phenomenal" Kraus learning the ins and outs of the quack specialty business and then, being an apt pupil, branched out for himself, about 1906, under the name of the "Hot Springs Doctors." He pursued much the same methods at that time as at present and established so-called institutes during 1906 and the next two or three years in Ottumwa, Iowa, Lincoln, Neb., Topeka, Kan., and other places. As at present, he claimed then that he intended to purchase property and build permanent institutes; but so far as known he never did so.

The idea exploited at that time was "a wonderful Hot Springs system of home treatment." Kinsey claimed in his advertisements that he was a specialist whose scientific research and ingenuity had enabled him to discover the secret of the Hot Springs waters and made it possible to give in any home the same results which formerly could be obtained only by a visit to Hot Springs, Ark. As is well-known, the Hot Springs of Arkansas are under the supervision of the United States government and physicians who practice there must have a license endorsed by the government authorities. With the shrewdness of the true quack, Kinsey ingeniously claimed that his system of treatment was highly endorsed by the United States government and that the Hot Springs Doctors held a government license to treat all chronic diseases, etc. He described himself as being "better known among his associates in the medical profession as the man with the *x*-ray eye on account of his marvelous skill in locating and curing diseases." It will be seen that within a year or so after Kinsey graduated from a third-rate night medical school in Chicago he bloomed out as a wonderful specialist with the "*x*-ray eye," claiming marvelous power in the cure of all sorts of chronic diseases. About 1909, probably on account of the grossly false claims made for his system of Hot Springs treatment and the government endorsement thereof, he found it expedient to change the name and methods under and by which he operated and began establishing offices under the name of the United Doctors.

LEGAL SNAGS

The practice of the United Doctors has not been all clear sailing, and Kinsey and his hired men have been legally called to account in numerous instances. Together with one of his hired specialists, Dr. Fletcher T. Riley, Kinsey was indicted in Milwaukee, Wis., in 1910, for violation of one of the statutes of Wisconsin regarding the publication of obscene matter in medical advertisements and for practicing without a license. Kinsey was convicted on the first charge and plead guilty on the other and was fined. Other indictments for similar violation of the statutes still hang over his head in Wisconsin. At the trial in Milwaukee, Kinsey on the witness stand stated that he used the term "United Doctors" simply as a name under which he conducted his business; that he wrote the advertisements and attended not only to their insertion in the newspapers but also to all business matters connected with the offices of the United Doctors. Kinsey has grown rich from the business and is said to own 400 acres of good corn land in the Illinois River bottoms in Tazewell County, Ill., and 1,500 acres in Canada. The income from the fifty or more offices is said to be large.

While Ben W. Kinsey has been apparently the sole owner of the United Doctors, his brother, Lee B. Kinsey, seems to have acquired an interest in the business. L. B. Kinsey lives at South Bend, Ind., and helps supervise the offices in Indiana and neighboring states. He formerly practiced as a civil engineer, but no doubt found from the experience of his brother that the advertising quack specialty business was a much more lucrative one.

SOME COUNTERFEIT "SPECIALISTS"

The character of the men employed by Kinsey as "specialists" in the offices of the United Doctors may be known by a brief history of a few of them.

Dr. Samuel C. Beach.—Beach graduated at Rush Medical College in 1892. In 1897 he practiced for a short time at McCook, Neb., a town of about 4,000 inhabitants, and according to our informant, after trying various other locations, he returned to McCook in 1902 where he remained up to about 1909 or 1910 when he opened an automobile repair shop. After a few months he again hung out his shingle as a physician, only to withdraw it in a short time. In 1910 he was connected with a traveling medicine show, it is said. He then became an assistant to a reputable physician in Omaha. He did not stay there very long—naturally, enough—but soon was reported to be engaged in "theatrical work" at Plattsmouth, Neb. After a short time he returned to Omaha for a brief period, and then became an employee of the United Doctors and went to the Port Huron office, where a prosperous business was done until the local clientele was milked dry and the office closed, when he was sent to the Bay City office. It is said that he is eccentric and unreliable, and that when he left McCook a number of creditors mourned his departure.

Dr. Fletcher T. Riley.—In 1910 this man was arrested with Ben W. Kinsey in Milwaukee for a violation of the Wisconsin statutes in regard to obscene advertising. He was graduated by the Ohio Medical College in 1877 and practiced for a time in Wisconsin. In 1909 he was connected with the United Doctors' office in Danville, Ill., and in 1910 with the Milwaukee

office. Later he severed his connection with the United Doctors and is now running an advertising specialist concern under his own name in Milwaukee.

Dr. Lee M. Barney.—This man was graduated by Northwestern University in 1889 and seems to be troubled with *Wanderlust*. He was licensed in Illinois in 1907, in Indiana in 1908, in Florida in 1910, and in Wisconsin in 1912. In 1909 he was employed as one of the "Hot Springs Doctors" and his license was revoked at Fort Wayne, Ind., on account of improper methods. He applied to the courts and, owing to the weakness of the Indiana medical practice act, was reinstated in 1910. In May, 1912, it is reported that he turned up at Wilton, Wis., with a bunch of fakers comprising Dr. Barney, an "optician" and a dentist, with a crude vaudeville show accompaniment. Barney left the company at Wilton and returned to Elkhart, Ind., and later went to Pensacola, Fla., where he is runn' g an advertising office under the name of the "German-American Doctors."

Dr. Warren D. Scott.—Scott is a homeopath who graduated at Hahnemann Medical College, Chicago, in 1882, and has been associated with Ben W. Kinsey since the days when he was running the offices under the name "Hot Springs Doctors." He is sometimes referred to as one of the "directors" of the United Doctors. Dr. Scott, like most of the other men employed by Kinsey, is moved around from one office to another as the occasion demands or prudence dictates. In 1907, while he was working at Terre Haute, Ind., for Kinsey as one of the Hot Springs Doctors an attempt was made to revoke his license on account of irregular practice. Scott, however, was not a resident of the state and did not remain in Terre Haute. The case against him was dropped.

Dr. Pierre Lafayette Stewart.—This man was graduated at the American College of Medicine and Surgery, Chicago, in 1905. After practicing at the village of Shelburne, Ind., for a time he was employed by the United Doctors at different times in the offices at Bloomington and Decatur, Ill., Omaha, Neb., and Logansport, Muncie and South Bend, Ind. In 1911, while he was practicing at Muncie and South Bend, Ind., charges were filed against him before the Indiana State Board of Medical Registration and Examination on account of fraudulent advertising and misrepresentation in connection with the Muncie office of the United Doctors and also because of his alleged excessive use of intoxicants. One specification in the charges referred to the fraudulent nature of a testimonial prepared by Stewart to which he secured the signature of one of his victims. This testimonial will be referred to later. Stewart's advertisements claimed that he used many complex and wonderful instruments for diagnostic and other purposes. When asked by the state board to tell with what instruments the Muncie office was equipped, Stewart could name only a few of the instruments known to and used by nearly every practicing physician. He admitted that he had no *x*-ray apparatus, no centrifuge and no cystoscope, and he further admitted that he had no instruments whose use was unknown to other doctors. Of course, he claimed that he had nothing to do with the advertisements inserted in the newspapers and that he had no hand in writing them, his only duty being to examine and treat patients—and collect the fee! The case before the state board for revocation of Stewart's license has never been decided. He severed his connection with the United Doctors, however, and later opened an advertising business of his own at Richmond, Ind., under the name of the Stewart Medical Company. According to the Richmond *Item* he suddenly left there about the middle of April, 1912, leaving several accounts owing to Richmond tradesmen for office furnishings, etc. The Bloomington (Ill.) *Bulletin*, April 15, 1912, states that Stewart, while in the employ of the United Doctors in that town, spent considerable time in neighboring barrooms and adds that a number of creditors in that city are anxious to find him.

Dr. L. F. Elston, alias L. F. Elstein, alias L. Fink Elstein, alias Leopold Finkelstein.—This multinamed individual at the time of its opening and for some time thereafter, conducted the office at Wheeling, W. Va. Formerly he supplied the Wisconsin offices in Eau Claire, Milwaukee, Racine, Janesville and Beloit, and is referred to in some of the advertisements as a "director" of the United Doctors. He received a diploma under the name of Leopold Finkelstein from the College of Physicians and Surgeons in Baltimore in 1885. The modesty of the real quack is shown in the statement made by him concerning his qualifications in the Wheeling *Intelligencer*, May 16, 1912:

> "One of the originators and the head of the United Doctors is L. F. Elston, A.B., M.D., a physician of vast learning, having devoted many years in obtaining his education to study [sic]. Dr. Elston has studied in France, Greece, Italy, England, Switzerland, Austria, Turkey and Russia. He has taken a scholarship at both Oxford and Yale. He has taken post-graduate work at the College of Physicans and Surgeons at Baltimore, Md., and was assistant to the great nerve specialist, Prof. Arnold, of the University of Pennsylvania. Dr. Elston was personally appointed a state health officer for the state of New Jersey by ex-Governor Abbott. A remarkable record is finished by the fact that he speaks, reads and writes nine languages."

The writings of Elston do not indicate that he profited much by the "extensive studies" in the various foreign countries mentioned by him. It is one of the customs of many men coming from abroad to claim graduation from foreign institutions which, when investigated, have no existence. Inquiry of the dean of the medical department of the University of Pennsylvania reveals the fact that no great nerve specialist by the name of Professor Arnold was ever connected with that university, and they know nothing of Dr. Elston, Elstein or Finkelstein. His claim to having been appointed a state health officer of the state of New Jersey is apparently based on the fact that Elston was appointed for a temporary service in 1893 for the purpose of making a report relative to the Russian-Jewish colonies in Southern New Jersey.

These men are typical of the men employed by the United Doctors and heralded by them in their extravagant advertisements as great specialists with marvelous powers of diagnosing and curing disease. They probably are as good as could be secured by advertisements in the daily newspapers, and are men of the stripe needed to carry on such a swindle as that perpetrated by the United Doctors.

BUSINESS MEN'S ASSOCIATION ACTS

When the institute of the United Doctors was about to be opened in Wheeling, W. Va., the Retail Business Men's Association of that city, prompted by some inquiries concerning their advertising methods, undertook to look into the standing of the United Doctors. Accordingly a letter signed by the Business Men's Association was addressed to the United Doctors asking the manager (Elston) to meet the Association and present credentials so that the Association might place them before the public correctly. The United Doctors or its representatives, of course, failed to appear and the Business Men's Association, in a statement in the Wheeling *Register* of May 15, 1912, made the following comments:

> "The public will have to put its own construction on the failure of the United Doctors to appear and give proper information concerning themselves to the recognized organization of the legitimate business concerns who deal directly with the people. A fair inference would seem to be that the men who are advertising here under the name of the United Doctors are part of the same crowd who are using this name in the central west to hide the true character of the individuals in actual charge of the offices, and are unwilling to be questioned too closely concerning their antecedents."

As a "come-back," Elston, for the United Doctors, in one of his advertisements in the Wheeling *Intelligencer*, May 16, 1912, attempts to answer these criticisms. Notwithstanding his claim to be master of nine languages his English does not show up very well in this quotation:

> "An article appeared in these columns recently, stating that a local business organization were to investigate the methods of the United Doctors. Owing to the unfairness of this organization in inserting this article in such a manner as to lead the public to believe that they had some moral or legal right to set themselves a judge and jury for the community and then placing still another article in the papers with further insinuation through no apparent reason for this badgering. There is a reason, of course—a very live and real reason, if one thinks and sees behind the scenes. Should one look hard enough he will not unlikely see a competitor pulling the strings."

A further attempt to offset the damaging criticisms made by the Business Men's Association appeared in an advertisement in the Wheeling *News*, May 19, 1912. Elston says:

"A telegram was received yesterday saying that the Beloit Commercial Association of Wisconsin would be pleased to answer all inquiries regarding the professional standing of the United Doctors. They state that the United Doctors' standing is in every way of the very best."

This statement was brought to the attention of the Commercial Club of Beloit which replied that there was no truth in it and that the president of the Commercial Club, who at the time was in California, would, if he were in Beloit, probably push the matter against the United Doctors for making such a statement. Neither the secretary of the club nor the members knew of any such action or endorsement.

FRAUDULENT TESTIMONIALS

The testimonial[2] is a time-honored institution and is the thing chiefly relied on by both the "patent-medicine" fakers and the quack in selling medicines or in procuring victims. It is freely employed by the United Doctors and a few examples to illustrate the shameless manner in which the public is deceived will not be amiss.

RHEUMATISM—A CURE THAT DIDN'T CURE

One of the charges made against Dr. Pierre Lafayette Stewart before the Indiana State Board was that he had prepared and inserted in the Muncie *Morning Star*, March 18, 1911, the following testimonial:

"MUNCIE, IND., Feb. 5, 1911.

"*To the Public:*—I want to make a statement to the public concerning my wife. As I am a resident of Muncie, I am not ashamed for anyone to know where she got her first and only relief. For thirteen years my wife has been suffering with inflammatory rheumatism and has been confined to her bed all this time. I tried doctor after doctor with no results and last Sunday I persuaded the specialist of the United Doctors to come and see her. He at once diagnosed her case and told me she could be relieved. I could scarcely believe this as I had experimented so much with other doctors, but I told him to put her under treatment.

"It has now been just one week since she began taking the doctor's treatment and she has been out of bed three days this week and I owe everything in praise of these specialists. If anyone does not believe this they can call at my house and I will gladly answer any questions. F. O. TROUT."

The real status of this testimonial is made plain by the following affidavit made by F. O. Trout and filed with the State Board:

"State of Indiana, } ss.
County of Delaware }

"I, F. O. Trout, of my own free will and under oath, hereby state that I have read an advertisement of the United Doctors, who are practicing medicine in Muncie, Indiana, said advertisement appeared in the Muncie *Morning Star*, March 18, 1911, and contained a letter to the public over my signature. This letter contained statements that are untrue and which I did not authorize. At no time while doctoring with the United Doctors could my wife get out of bed without assistance.

"I wish to further state that Dr. Pierre Lafayette Stewart is the man who attended my wife as above stated, and who represented the United Doctors. The aforesaid Dr. Pierre Lafayette Stewart made the statement at the beginning of his treatment of my wife that he would have her walking in six weeks, and on this representation and agreement I paid him $19.50, which he obtained under false pretenses, as at no time since the beginning of his treatment has my wife been able to walk without assistance. At this date, May 6, 1911, she is still an invalid and is confined to her chair.

"I make the foregoing statements voluntarily that the public may know the truth about this case.

"(Signed) F. O. TROUT.

"Subscribed and sworn to before me this 6th day of May, 1911.

"(Signed) OMAR G. WEIR,
"Notary Public.

"My com. expires May 28, 1911."

MAKING CAPITAL OF A SIMPLE CONDITION

As an instance of the way in which the United Doctors and other quacks make capital out of some simple condition the following testimonial of Mrs. William E. Moon of Greentown, Ind., is interesting:

"GREENTOWN, IND., April 29, 1912.

"*Gentlemen:*—In the night of July 8, 1906, our little boy, who was three years old, began to choke and gasp for breath. He was so bad that we did not think he would live until we could get the doctor, and from that time on up to one year ago, before we visited the United Doctors, which was in October, 1911, he had the same spells every six or eight weeks, which would last from eight to ten days. For one year before we visited the United Doctors the bad, loud, hard breathing bothered him all the time. He coughed and breathed so hard and loud that together with the constant care he required the rest of the family were worn out. The condition could not be exaggerated. He vomited great quantities of phlegm and about all his nourishment. He became pale and bloodless, and was not able to play or go to school on account of the distressing symptoms. We tried doctor after doctor, and bottles and bottles of patent medicines, and almost smoked his eyes out, all to no avail, for he grew worse all the time. Two of the best specialists in Evansville utterly failed to benefit him.

"On October 4, 1911, we began the United Treatment of the United Doctors. Wonderful to say, for it sounds like magic, the first night he slept like a new born babe, something he had not done for a year before. He has had no trouble since. He goes to school every day, and can run and play with any boy. He has picked up in flesh until the neighbors hardly know him.

"MRS. WM. E. MOON."

On inquiry into this wonderful case it was found by our informant that this child was subject to ordinary spasmodic croup occasionally, which was relieved by the family physician by the usual simple methods. In the hands of the United Doctors, however, the case becomes a horrible example of the failure of the ordinary doctor to recognize the true condition. This all helps to impress the gullible as to the great powers of the United Doctors.

A RELATIVE BOOSTS THE GAME

John D. Clark says that he is a real-estate dealer and resides at Mackinaw, Ill. The South Bend (Ind.) *News*, Jan. 7, 1912, contains a long testimonial from John D. Clark in which he praises the United Doctors highly for curing him of constipation of sixteen years' standing which, he says had made him a nervous wreck and at times rendered him utterly unfit for business. He also boosts their game by including in his testimonial a statement that when he saw what this wonderful new treatment was doing for him, he advised a friend who had gall-stones to go to the United Doctors for treatment. After going the rounds of all the other doctors without relief, some of whom advised operation, John D. persuaded his friend to go to the United Doctors. He fails to state whether or not the United Doctors cured the gall-stone patient, but leaves it to be inferred that they did.

On inquiry it was found that John D. Clark is connected by marriage with Lee B. Kinsey, who manages the South Bend and other offices, and that during the previous two years, at least, Mr. Clark had apparently been a perfectly healthy man and had never been laid up a day during that time. Possibly the testimonial supply was getting a little stale and so Cousin-in-law John D. was called on for a little boost.

INFRINGEMENTS ON THE UNITED DOCTORS' GRAFT RESENTED

As might readily be supposed the success of the graft worked by the United Doctors has not been overlooked by other fakers, and the name "United Doctors" with slight modifications has been appropriated by them, so that we have the "United Doctors, Specialists," "Original United Doctors," "United Doctors, Incorporated" and "Northwestern United Doctors." This infringement on their particular form of swindle is resented by the United Doctors, and in their advertisements they complain of the "small-fry imitators" who claim to have "something just as good" or "the same thing under a different name." They say: "The phenomenal success of the United Doctors in curing old chronic and deep-seated diseases by their wonderful new system of treatment has brought forth a lot of swindlers pretending to have the same treatment." This is an instance of the pot calling the kettle black. They even offer in one of their advertisements $100 reward for any person in Nebraska, Iowa, Missouri or Kansas who convicts any doctors or persons of fraudulently obtaining money by pretending to be the agents of the United Doctors. This offer of reward is set forth as a "WARNING TO SICK PEOPLE." As a piece of skilful advertising this probably brings returns. Among other quacks who

2. Only a few testimonials are given here on account of lack of space. Others will be found in the pamphlet in which the story appears in full.

have appropriated the name "United Doctors" are the United Doctors of Joplin, Mo., run by Dr. Harry V. Dresbach, who has also recently opened an office at Pittsburg, Kan., and who exploits the "oxyoline machine" and the "Alfalfa Remedies." Also the "United Doctors," incorporated in Indiana by Dr. James Monroe Hancock, formerly of Chicago, and a number of other men. This concern has offices at Michigan City, Marion and Lafayette, Ind. Their advertising matter is practically the same as that of the United Doctors owned by Kinsey, and they refer to his other offices and use some of the same testimonials.

The "United Doctors, Specialists," "Original United Doctors" and the "Northwestern United Doctors" and a host of other similar concerns, some of which have been named above, do not establish offices, but visit certain places for a day or two periodically or occasionally, after announcing their coming in the local newspapers. Otherwise their methods are much the same and the advertising matter for these concerns is almost identical. They employ cheap doctors as Kinsey does and their equipment and services are, if possible, more worthless than those of Kinsey's hired specialists.

NEWSPAPERS PARTNERS IN THE SWINDLE

The success of these swindling concerns in making money depends on their use of the newspapers, and the credulity of the people in accepting the false and fraudulent statements they make in their advertisements. When once the people know how they are defrauded and deceived in a matter so important as their health, and when they realize that the newspapers of their respective communities which they support, are really partners in this cruel swindling game, they will call the newspapers to account, and the United Doctors and all the other shameless medical frauds of this character will suddenly find themselves out of business.

THOREMEDIN ONCE MORE

We have received the following letter for publication:

"In justice to my reports in regard to my experience with what I called a 'thorium paste,' which was afterward known as 'Thoremedin,' and criticized in THE JOURNAL, I claim a right to speak in regard to the Report of the Council on Pharmacy and Chemistry, and Dr. Pusey's article on 'Sulphuric Acid Pastes,' in a recent issue of THE JOURNAL: for I still do not believe that a full, fair and impartial investigation of the subject has yet been given, and I feel confident that a wider experience with the exact combination, rightly prepared and correctly used, will show the error in the hasty conclusions of Dr. Pusey and others.

"The report of the Council refers to securing 'the help of some men of established reputation in the treatment of cancer,' and three petty reports are furnished, one of them stating that 'in only one instance was it possible to test very accurately the action of the two mixtures,' while the other reports give nothing clinically which can be of the slightest service in guiding the profession in regard to the value or proper use of the combination which I have advocated.

"Opposed to this I can give the names of one hundred or more qualified practitioners, many of them well-known dermatologists, who have used the preparation referred to with satisfaction, and of a hundred or more others who have watched the results at my clinics at the New York Skin and Cancer Hospital; these men can, and many of them will, testify to the surprising results constantly seen to follow the correct use of these remedies, as I have described it in a recent article on 'The Technic of Using Thorium Paste,' shortly to appear.

"In the light of such an experience, dating back now two years and a half, and relating to between two and three hundred of my cases in hospital and private practice in New York, and very many elsewhere, testified to by hundreds of practicing physicians, many of very high standing, I claim that it is unreasonable to accept the conclusions of a 'Council on Pharmacy and Chemistry' who do not profess to know anything clinically in regard to the value of remedies, but who accept such flimsy negative evidence as is presented in their report.

"I think the medical profession has a right to demand the names of the members of the Council who had actual knowledge of the matter before the publication of the report and who voted for its publication, and also the names of the three men 'of established reputation in the treatment of cancer,' who made the astonishing reports, on which was printed the report of the Council. When this is done I will furnish the names of one hundred reputable practitioners in many lines of practice, many of them 'of established reputation in the treatment of cancer,' who will testify as to the truth of what I have reported and as to the value of the remedy in question. I regard it as unfortunate that Squibb and Sons have discontinued the manufacture of the article under question, for its practical value is now so widely recognized by the profession that spurious substitutions may be used with harm. I am employing it almost daily in my office, sometimes several times in the day, and shall continue to do so, hoping that the Squibbs will manufacture it for me.

"The length of this letter precludes my considering Dr. Pusey's article, except to say that it has very little bearing on the subject: for, as I have shown elsewhere, the paste, as I have used it, is not a caustic, but a profound alterative of tissue from the peculiar combination, in which the thorium plays undoubtedly a part. In using the paste I often wash out the sulphuric acid before applying it.

"I regret that I have been drawn into this controversy, and yet I feel that from the first there has been a rather hasty and imperfect judgment of this important new remedy, in which I have had absolutely no other interest than a scientific and humanitarian one.

"L. DUNCAN BULKLEY, M.D., New York."

This letter is published not because it is germane to the subject, but because Dr. Bulkley feels that it should be published. Thoremedin is a dead issue. It no longer exists. Its manufacturers withdrew it from the market after it had been demonstrated that the preparation had no therapeutic action that was not also possessed by a sulphuric acid paste. This was the point under discussion, and that point has been settled.

Dr. Bulkley's ill-concealed slur on the Council on Pharmacy and Chemistry may be ignored. For his information, however, it may be said, in passing, that every member of the Council "had actual knowledge of the m tter before the publication of the report"—as, of course, is the case in every report issued by the Council.

We refrain from commenting on Dr. Bulkley's statement that a mixture consisting of nearly one-third its weight of concentrated sulphuric acid "is not a caustic but a profound alterative of tissue." We also hesitate to comment on his further statement that "in using the paste I often wash out the sulphuric acid before applying it."

In view of Dr. Bulkley's remarkable results with the preparation we can only suggest that if he will bring the same enthusiasm and skill to bear in the use of a plain sulphuric acid paste, he may get results that will average well with those obtained with Thoremedin. Unfortunately, it is hard to read into results obtained with a simple old-fashioned remedy the same marvels that seem to follow naturally in the use of a speciously named secret product.

THE SINCERITY OF THE PHYSICIAN IN ADVISING CONCERNING "PATENT MEDICINES"

The *Progressive Farmer* (Raleigh, N. C.) February 1, says editorially:

"It has always been a mystery to the writer, why it is that most people have such confidence in the medical advice of physicians when serious illness comes and their lives are at stake; but with regard to 'patent medicines,' repudiate this same expert medical advice, and charge the men with whom they trust their lives with being ignorant of the value of these 'patent medicines,' or as being influenced to give false advice from personal or mercenary motives. In fact, the advice of the medical expert of high standing regarding these 'fake' medical advertisements is just as accurate and reliable and just as unselfish and uninfluenced by prejudice as is his advice regarding the personal disease of his patient. That the medical man does not advise against 'patent medicines' for fear of losing practice is conclusively shown by the counter facts, that medical men are the greatest advocates of preventive vaccination for small-pox, and all other modern methods of preventing disease, and of all the hundreds of medical men engaged in original research (trying to find out new medical facts), 95 per cent. of them are studying methods of preventing disease."

Correspondence

What a Local Society Can Do

To the Editor:—One of our local papers recently carried a large advertisement of "English Hemorrhoidal Remedy," containing what purported to be a signed statement from forty local druggists, stating that they were much impressed with the value of this remedy, and unreservedly endorsed it. Our local medical society sent each one of these druggists a letter, asking them to let us know on what they had based this strong endorsement. They scrambled all over each other to send replies disclaiming any such endorsement, and sent back to the exploiters their stocks of the nostrum, which they had held on consignment. One establishment replied naively that it never had approved of this method of advertising, and, *as the goods had not sold well*, it had sent them back.

Our action will materially decrease that kind of advertising in the future, and was well worth the trouble it cost. It is reported as a tip to other local medical societies.

In return, perhaps you or some one else can tell us if there is real hope for a community in which the leading paper, one of the most conservative and influential in New England, and controlled by the president of the local antituberculosis society, who is also a member of the State Tuberculosis Commission, still publishes advertisements of Eckman's Alterative for Tuberculosis, and enlivens its columns with the answers of the sprightly Mae Martyn to her anxious inquirers, incidentally mentioning the virtues of those simple and inexpensive household remedies, Spurmax, Gogag, Puquik, Pemore and Ogosh.

AUGUSTIN A. CRANE, M.D., Waterbury, Conn.

COMMENT.—The local society at Waterbury is to be commended. Yes, we believe "there is real hope for a community" that has the kind of local medical society that exists here. We would suggest that the editor, owner, publisher and advertising manager each be sent one of our pamphlets showing the fraudulence and worthlessness of "Eckman's Alterative" and that our exposé of the Mae Martyn "prescription fake" humbug, also be called to their attention.

Another Misstatement Concerning Phylacogen

To the Editor:—In the Special Phylacogen Number of *Therapeutic Notes*, published by Parke, Davis and Company, Phylacogens (Schafer's Modified Bacterial Derivatives) are said to have been discussed at the meeting of the Westmoreland County Medical Society, held at Greensburg, Pa., June 17, 1912.

This statement of Parke, Davis and Company is not true. We held no meeting on that date, and this product has never been discussed by our society.

M. W. HORNER, M.D., Mount Pleasant, Pa.
Secretary, the Westmoreland County Medical Society.

The Inadequacy of Bishop's Antitoxin Hypothesis to Explain Fully the Symptomatology in Morphin Addiction

To the Editor:—Dr. Bishop in his article on narcotic addiction in THE JOURNAL (Feb. 8, 1913, p. 431), does not, it seems to me, lay sufficient emphasis on the part played by the nervous system in the symptomatology of drug addiction. Whether or not we accept his hypothesis of antitoxin development in morphin users, it comes up to us in the end to deal with the addiction as manifesting itself in a disordered mental and nervous system. Therapeutically, we use narcotic drugs in order to produce some definite effect on or through the nervous system. In addiction the patient attempts to continue indefinitely a reaction which takes place physiologically in therapeusis.

Thus the nervous system deprived of opportunity for normal functioning through the inhibiting influence of a drug necessarily becomes pathologic in its reactions. In the case of morphinism physiologic tolerance is quickly exceeded; toxic effects are noticed practically from the beginning. It is well known that any toxin introduced from without, or elaborated within the body, acts injuriously on the cortical and ganglionic cells and nerve fibers. Therefore, whether we consider the symptoms as due directly to the toxic effects of morphin, or to effects of an antitoxin induced by morphin, we face a disease syndrome which must be regarded and treated in the light of nervous and psychic deterioration. In thus regarding morphinism as a nervous and psychic disease picture, I do not for a moment lose sight of local organic disturbances, or belittle the therapeutic measures taken by Dr. Bishop and others for their correction. It is certainly essential that therapeusis shall be instituted for the direct correction of such disturbances. Yet the fact remains that back of all such disorders, whether secretory, trophic or cardiovascular, there exists a deranged nervous system, the great etiologic factor in their causation.

The sensations streaming into consciousness from the various organs of the body normally function without the individual being aware of the process. It is when this metabolic equilibrium is upset or disturbed that the individual becomes cognizant, through discomfort or pain, of his normally unconsciously performed bodily processes. By locking up the secretions and otherwise interfering with the normal metabolic action of the organs, including the nervous system and brain, morphin induces a disturbed or painful cenesthesia—a sense of general bodily discomfort—which may become unbearable. In order to maintain a sense of well-being against the cumulative toxic effects occasioning this bodily and mental discomfort, the dosage must be gradually increased. The time comes in the majority of cases when no dosage is sufficient to produce the desired effects. All the while the patient is losing resistance; he is becoming habituated to the shutting out of all painful sensations or impressions whether in the physical or psycic realm. Thus is brought about that character deterioration which is always seen in the drug addict and which varies according to the individual's original fiber. The higher mental qualities constituting character regain their former vigor only after a lengthy absence from the drug, and when complete organic rehabilitation has taken place. This delayed character (will-power, proper ethical valuations, etc.) reestablishment is to my mind the main factor in the causation of relapses.

In dealing with the mechanism of relapse, the important bearing of the vicious mental processes which have been established during addiction must be taken into account. The patient is, as it were, under the yoke of his associative memory processes. His habitual reaction to pain or fatigue or mental stress has been resort to his drug. He has, in reality, established a sort of pain—morphin reaction, paralyzing, thereby, his natural resistive resources. From this associative process it is extremely difficult for the patient to release himself. Long after bodily health has apparently been reestablished, when physical stress (digestive, cardiovascular, conditions of fatigue, etc.) or mental strain arises, he is likely to react automatically, instinctively, as it were, with no volition whatever in the matter, in resort to his drug.

C. C. WHOLEY, M.D., Pittsburgh, Pa.

Restatement of the Position of Meigs on the Behavior of Muscle

To the Editor:—In my recent article on the colloid-chemical theory of water absorption in THE JOURNAL, Feb. 1, 1913, p. 348, I say that "Meigs has himself now given up his original osmotic notions regarding the behavior of muscle." This is only half true, for in a letter just received Dr. Meigs informs me that he does still believe that "striated muscle fibers are surrounded by semipermeable membranes," and that "smooth and striated muscle differs in this very point," the smooth muscle acting purely colloidally.

This correction is made in order to express the views of Meigs more accurately. It does not of course alter my own opinion in the matter, which, while it loses in part the support of Meigs, runs parallel to that of F. Hofmeister, N. R. Proctor, von Fürth and Lenk and Wolfgang Pauli.

MARTIN H. FISCHER, M.D., Cincinnati.

Queries and Minor Notes

ANONYMOUS COMMUNICATIONS will not be noticed. Every letter must contain the writer's name and address, but these will be omitted, on request.

DERIVATION OF FAT IN THE STOOLS FROM THE FOOD INTAKE

To the Editor:—In the *British Medical Journal* (Nov. 9, 1912, p. 1281), Williams reports the finding of saturated fat and fatty acid in intestinal concretions, intestinal sand and appendix concretions, and refers to the case of Mr. Paul in which brownish-red granules containing fat in large quantities were found in the biliary passages. He implies that the intestine excretes fat from the blood. Is there any scientific foundation for this opinion? S. L. B.

ANSWER.—The occurrence of true intestinal concretions consisting largely of fat or fatty material is so unusual or problematic that the current text-books have little or nothing to say on this subject. Many years ago Robiquet and Lassaigne reported analyses of concretions which indicated 60 and 74 per cent. of "fat," respectively (see Gorup-Besanez, E. F., Lehrbuch der physiologischen Chemie, 1867, p. 505). These data were obtained at a time when the expression "fat" represented the crude ether extract which might well have included numerous contaminating substances other than fat itself. The steatorrhea mentioned in our editorial column ("A New Inborn Error of Nutrition," THE JOURNAL, March 1, 1913, p. 668) and the lumps of soap sometimes passed after the ingestion of olive oil are not due to a true excretion of fat through the intestinal wall from the blood or tissue itself. We are not aware that any justification whatever exists for the type of excretion to which our correspondent refers, although Williams has lately described concretions rich in calcium soaps and found in the appendix and elsewhere which he suggests are due to the abnormal excretion of these soaps or allied compounds by the mucous membrane. His evidence for the origin of such concretions in the intestinal mucosa is, however, most indirect and far from convincing. From the investigations of Mendel and others it is known that calcium is excreted by the bowel; and this fact is sufficient to account for the precipitation (as calcium soaps) of any fatty acids with which the alkali earth may come in contact in the lumen of the intestine. The production of fatty masses in the degenerative changes in cells lining the intestine can scarcely be referred to as a secretion of fat into the bowel. Fat and its derivatives in the stools are derived, in ultimate analysis, from the food intake. Fat-like substances soluble in ether and represented by cholesterol, etc., may, however, be derived from the alimentary secretions and find their way into concretions.

EFFECT OF PASTEURIZATION ON BACTERIA IN MILK

To the Editor:—I enclose a copy of a recent report of the Milk Commission of the Chicago Medical Society in which occurs the statement that "the commercial pasteurization, while sufficient to destroy ordinary milk bacteria, does not kill the tubercle bacillus." Please inform one desirous of knowing the facts whether this statement is true. D. L. K.

ANSWER.—If the expression "commercial pasteurization" in the report referred to is intended to mean a method of heating which does not kill the tubercle bacillus—which is not real pasteurization at all—it simply prejudges the whole question and there is nothing more to be said. If, on the other hand, it has the meaning plainly attaching to the words and relates to pasteurization on a large scale under commercial conditions, the statement is not correct. Experiments have shown that the tubercle bacillus is killed by exposure at 71 C. (160 F.) for one minute; or if the holding type of pasteurizer be used, a temperature of 63 C. (145 F.) for from thirty to forty-five minutes will suffice. Well-known types of pasteurizing machines which will fulfil one or the other of these conditions are in practical daily use in large cities in this country. The report referred to is erroneous in another particular—namely, in its statement about the destruction of "ordinary milk bacteria." The well-known work of Ayers and Johnson showed that commercially pasteurized milk always sours through the development of lactic acid bacilli, which survive the heating process. Some of these lactic acid bacteria, which we suppose to be meant by "ordinary milk bacteria," have a higher thermal death-point than the tubercle bacillus.

CORRECT MEDICATION

To the Editor:—After reading the article "Bad Medication" (THE JOURNAL, Jan. 25, 1913, p. 280), I would like to know where I can obtain a book which will give me, along with other things, the action and dosage of drugs, how often to repeat the dose and the length of time after administration it requires for each drug to begin to act. S. E. JONES, M.D., Lucerne, Ind.

ANSWER.—Unfortunately, there seems to be no book which will give these data for every drug. It depends on the object to be gained and the nature of the disease for which we are prescribing. Obviously, if we were giving strychnin as an ordinary tonic, we would give it not more than three times daily. If we wish to get its effect on the respiration, we might find it necessary to use doses once in three or four hours. The U. S. Pharmacopeia, the "Physicians' Manual of the U. S. Pharmacopeia," the National Formulary, the "Handbook of Therapy" and Osborne's "Materia Medica and Pharmacology," 1906, will give a great deal of information and many valuable hints on these matters. Of course, a modern work on pharmacology should be consulted, which will describe the action of drugs and their therapeutic uses.

TEST FOR UROCHROMOGEN IN URINE

To the Editor:—Please inform me how the test for urochromogen in urine is made. According to the abstract of the article by Weisz, THE JOURNAL, Feb. 8, 1913, p. 485, "the urochromogen test is applied to urine diluted to one-third and separated into two equal portions. To each half is added three drops of a 1 per thousand solution of permanganate, and the tint is compared with the untreated half. A pure distinct yellow is the positive reaction." I want to make this test, but cannot do so according to these directions. SAMUEL P. HAND, M.D., Demopolis, Ala.

ANSWER.—Instead of "to each half," the directions should read "To one-half are added three drops," etc. The directions in full are: "Fill a test-tube to one-third with the clear fresh urine; then dilute it three times (*hierauf wird dreimal verdünnt*) and separate into halves. Add to one half three drops of 1:1,000 solution of potassium permanganate; mix thoroughly and compare with the other half."

A REQUEST FOR HISTORY AND CASE-RECORD BLANKS OR CARDS

To the Editor:—I am endeavoring to get a history and case-record card. Please give me your idea of a good card of this kind. My idea is to have history, clinical record, diagnosis, treatment and all analyses on same card. F. G.

ANSWER.—Other correspondents occasionally ask similar questions. It will be appreciated if our readers will send us two specimens each of any cards and blanks of this sort which they are using. We also would be glad to know the source of the card, that is, whether a stock card from some firm, or a specially printed card by some local printer. It may be that from all these various cards we can arrange a card with the good features of all, which can be recommended to physicians interested.

SIGNIFICANCE OF THE STROKE ACROSS THE R AT THE HEAD OF A PRESCRIPTION

To the Editor:—Will you kindly tell a reader of THE JOURNAL the significance of the line across the tail of the R on our prescription blanks? I think that the R means recipe, but what means the line? C. E. RISTINE, M.D., Knoxville, Tenn.

ANSWER.—Bernard Fantus in his "Prescription Writing and Pharmacy" says that the upward stroke at the end of the R standing for recipe is believed to have originated in the astronomic sign of the planet Jupiter, which was formerly put at the head of prescriptions to symbolize a prayer to the deity for divine blessing on the remedy ordered.

TECHNIC OF MANUFACTURE OF ACETYLSALICYLIC ACID

To the Editor:—Please give the technic of the manufacture of acetylsalicylic acid, or refer me to some book which will deal with this subject completely. FRANK H. BENT, M.D., Wallace, Neb.

ANSWER.—The process for the manufacture of acetylsalicylic acid (aspirin) is described on page 41 of New and Nonofficial Remedies, 1913.

Society Proceedings

COMING MEETINGS

Medical Society of the Missouri Valley, Kansas City, March 20-21.
Mississippi State Medical Association, Vicksburg, April 8-10.
Tennessee State Medical Association, Nashville, April 8-10.

CONFERENCE OF THE AMERICAN MEDICAL ASSOCIATION ON MEDICAL EDUCATION AND MEDICAL LEGISLATION

Held in Chicago, Feb. 24-25, 1913

The Ninth Annual Conference of the Council on Medical Education of the American Medical Association was held at the Congress Hotel, Chicago, Monday, February 24, followed on Tuesday by the Conference on Medical Legislation.

The Monday session was presided over by DR. ARTHUR DEAN BEVAN of Chicago, whose opening address (in abstract) was as follows:

Third Classification of Medical Colleges

The classification of medical colleges of the United States is the most complete classification that has so far been made. It is the result practically of eight years of work. In this classification the schools have been divided into Class A plus, Class A, Class B and Class C. The Class A plus schools are the well-organized medical schools giving acceptable courses. In addition, they have already placed themselves on higher preliminary requirements, requiring one year or more of university science. In that group there are twenty-four schools. The Class A group are also acceptable schools. The Council would like to submit to each school that desires it a specific statement of the reasons for its classification. The Class B group are schools which require a considerable general improvement in order to be made acceptable. The Class C schools are schools which the Council regards in a group which would require complete reorganization to make them acceptable.

There are altogether now a little over 100 medical schools in the United States. When this Conference began its work there were 166. A number of the schools on this list have by merger or otherwise ceased to exist within the last year or will discontinue before the opening of the next session, making in all about 100 schools. Twenty-eight of the state boards are now refusing recognition to between twenty-five and thirty of these 100 schools. It is fair to suppose that somewhere in the neighborhood of seventy of these schools will continue to exist and will develop and grow stronger year after year, and that the majority of the twenty or thirty schools on the list will by merger or otherwise discontinue.

Since 1905 such great improvements have been made by the medical colleges of the United States that about sixty of the schools that will probably continue to teach medicine and develop and grow strong have agreed to adopt a year of physics, chemistry and biology. We have evidence to show that a large number of the better schools have recognized the importance of the intern year in a hospital, and some recent statistics which we have collected show this rather interesting fact. We have written to these different schools, asking them to give us the number of graduates in the last class who obtained hospital positions. The reports are not all in, but the situation is most encouraging. Out of a total of 956 in last year's graduating class in the seventy better schools, about 70 per cent. have received hospital internships. We are in much the same position as the United States was a number of years ago when there was a discussion on the resumption of specie payment; so much has been accomplished that practically the only thing necessary is for the 75 per cent. of the better schools to resume, to place themselves on the plane of the premedical year of science and of the hospital internship. With the assistance of the Association of American Medical Colleges and the Federation of State Boards, it now seems necessary to do but one thing, and that is to cooperate in this movement with the Council, so that within a short time we may accomplish what we set out to in 1905.

In regard to the schools of the South, Dr. Colwell, Dr. Witherspoon and I visited Augusta, Ga., during this winter. The community there realized the importance of the development of a strong medical school. The medical school succeeded in convincing the people of Augusta and of the state of the importance of supporting a high-grade medical school. They succeeded in having the city turn the hospital over to the medical school, so that now a city hospital is being built on the grounds of the medical school. It has placed a dispensary under the control of the medical school; the city health department work is placed under the control of the medical school, and the governor of the state, the mayor of the city and the important people of the community were back of this movement to develop a strong medical school in that community. They have succeeded in securing two kinds of instructors for the first two years of instruction, and they have definitely agreed to accept this science requirement and the clinical intern year by 1914. The same thing is happening in South Carolina.

Improvement in Medical Schools

DR. N. P. COLWELL: In 1904 there were 166 medical schools, which was nearly one-half of the world's supply of medical colleges. The decrease since that time has been gradual. Since 1907, when the first classification of medical colleges was made, the decrease began rapidly through the disappearance of the commercial medical colleges. These have largely gone out of existence. The number of other schools has been decreased largely through the merger of several small schools in different localities into one stronger medical school, as, for instance, in Louisville, where five medical colleges were merged into one. The same thing has occurred in Indiana, Minnesota, Iowa and a number of other states. The decrease in the number of medical colleges has not been to the detriment of medical education, but has resulted in giving medical students better opportunities. It has brought about fewer but better medical schools.

In 1900 there was but one medical school requiring any education above a high-school course, and conditions remained about the same until 1904, since which time there has been an increase through agitation and indication of the need of these higher preliminary requirements, so that now there are in the neighborhood of sixty medical schools which are exacting a high preliminary requirement.

Six states have gone beyond the Council's minimum requirement of entrance and have gone to the second-year requirement rather than one. There are ten which have gone on to one or two years of college work for their requirement with the adoption of the five-year medical course, including the preliminary year in physics, chemistry and biology. North Carolina has adopted the standard of entrance requirements of the University of North Carolina. The prospects in the South are excellent and it is only a few years when the South will be equal to the North at the rate the South is now progressing.

The European Side of Medical Education

MR. ABRAHAM FLEXNER of the General Education Board, New York City, contributed a paper on this subject, which was read by Dr. George Dock, in the absence of the author.

Among other things, Mr. Flexner said: France and England enjoy certain highly important advantages over us. From them we can at least learn that a hospital is enormously strengthened by an intimate relationship with a medical school and that the free movement of well-trained medical students in its wards is an unmixed advantage to the patient, to the staff, to the student and to medical science itself. The clinical clerk who embodies this relationship is, however, now in a fair way to acceptance in this country. The clerkship was introduced into America by Dr. Osler at the opening of the Johns Hopkins Medical School, and it is being extended as rapidly as conditions permit. It is no exaggeration to say that Germany has no more important contribution to make to us than is represented by this idea, which we have taken from England and France. With this brief reference, the fuller exposition of which would require a separate paper, I shall now turn to my topic in its limited form, namely, the German side of medical education.

A few of the striking features of German medical education are generally understood and appreciated in America, notably the opportunities for research on the part of advanced students and the value of the assistantship in the laboratories and clinics. It is nevertheless surprising how inadequately many of those who have studied in Germany grasp the sources of German strength in the field of medical education, the actual details of its organization, and its failures and defects. Equal vagueness prevails as to the precise extent to which the German system is transferable to us or as to how far its transfer is desirable.

The going to Germany of American students will be construed by laymen to mean that they find something there which is not found with equal ease and in equal abundance in the medical schools of their own land. To what is this superiority, if such it be, due? I attribute it to the fact that a wise and powerful government has drawn a sharp line below which no medical school can live. The German medical faculties are not all equally strong, equally varied, equally resourceful. Their laboratories differ in size, in modernity, in productivity and in efficiency. The German clinics vary in the extent of differentiation, in the number of beds, and in the adequacy and efficiency of their laboratory attachments. In respect to educational standards reached by its students, in respect to the intelligence and capacity of its teachers, and in respect to laboratory and clinical facilities, every medical school in Germany far surpasses what any state in America lays down as the minimum requirements. No boy is permitted to begin the study of medicine in Germany until he has passed through a serious secondary school training covering nine years.

The medical curriculum in Germany practically falls into three unequal divisions. The first comprises physics, chemistry and biology, and is in my judgment treated in a stepmotherly way. The work occupies the first semesters in the university, during which adequate time and at times adequate equipment for sound teaching are lacking. The second division includes anatomy, physiology, pharmacology, pathology and legal medicine. The facilities for teaching and investigation in all these branches are excellent. The third division of the German curriculum is devoted to the clinical branches.

The German medical profession respects, as the American medical profession does not respect, the teacher of medicine. Very properly, the Germans hold that medical teaching is a profession not identical with medical practice. They therefore allow the universities to select their teachers of medicine and surgery where and as they please, and they do not dream of contesting or sharing hospital privileges with these men.

DISCUSSION

DR. GEORGE DOCK, St. Louis: Mr. Flexner has called our attention to the imperfect preparation of medical students. Every one realizes this. The question arises, have we as medical educators done enough to overcome this lax preparation in the secondary schools? I think we can do some more. It is a well-known fact that the ideal of study in the secondary schools and colleges is not exactly the one that scholars hold. I think it can be said, without any great risk of contradiction, that the chief idea of the American youth is to learn life, to learn men, and many of them when they go to college frankly admit they do not like to learn philosophy, logic, grammar, mathematics or biology, but to learn life, to learn manners, to learn how to get along, and how to manage other men. I dare say, the method of learning life in the fraternity and on the athletic field has had not a little to do with the great success of many Americans in the practical lines of life. Does it prepare for the profession of medicine? It does not do so, for the profession of medicine requires the most strenuous preparation. From what I have seen of German medical students I believe that everything Mr. Flexner has said is true. They have better-disciplined minds. What they have studied they know better than our men, and for that reason they can take advantage of the medical course better than our students can. Cannot we do more in medical schools in seeing that the preparation of medical students has been carried out in a more fitting way? The men that come from a great many of the colleges and preparatory schools are imperfectly trained in the science of study, in the ability to write and understand and reproduce anything they have read in their own language. We have in some schools and colleges and universities a list of those schools that are supposed to be in good standing, but we all know that many students come from these institutions that are not at all fitted to study medicine. Would it not be possible to blacklist these schools and refuse them recognition when we find that students coming from them are so badly unprepared? It seems to me that something of that kind might be possible.

As to the migration of students from one school to another, I take it that the German medical student does not migrate for the purpose of going to a school or place where there are good courses given, but for the purpose of working with certain men. Sometimes he migrates for social or climatic purposes, but as a rule he migrates to undertake particular kinds of work with particular men. In this country, where the whole course must be extended over nine months, one must give one's entire time to the different courses of study in order to receive any credit, and it is practically impossible to do anything of that kind. For instance, no one could attend a great course in pathology or any other branch in this country without being penalized. Along with our long courses we have another serious handicap as compared with the German students. In Germany they have incentives for work which we fail to have in this country, and so I strongly suspect a certain amount of routinism or bureaucratism is liable to creep in. In Germany students have to take courses they do not care for.

DR. W. B. CANNON, Boston: I have been impressed by what Mr. Flexner has reported with reference to the spontaneous work which medical students do in Germany throughout the course. There are in the better schools in this country two factors which work against this exhibition of spontaneity on the part of students. In the first place, in schools which require a college degree for entrance, there is a long period of receptivity. The men have to go through four years of college work in which they receive little stimulus for independent work, and then they enter a medical school and have four years more of similar training. Another factor which is unfavorable to the development of this spontaneity is the fact that the medical curriculum is a rigid one. At Harvard University we have felt the need of introducing a certain amount of flexibility in the curriculum, and in order to do that we have instituted two general examinations as a means of passing through the schools. One general examination takes place at the end of the second year, after two years of laboratory work, the other at the end of the fourth year. The student during the first two years can take his own pace. If he does not care to go so fast as other students he can make up that work any time he cares to do so during the first two years. If he becomes interested in some particular subject, he can drop out and work on that particular subject and make up routine work during the remainder of the first two years. If he cares to utilize the summer for special work, which would lead either to the development of special work or to a better acquaintance with some phases of the medical sciences that he would like to follow, then he can do that. We hope by means of thus loosening the rigidity of the medical curriculum to introduce into American medical education some of the spontaneity, some of this expression of individual interest which the German system has so well developed.

DR. ABRAHAM JACOBI, New York: As far as students are concerned, I think they do quite well in this country, although there may not be so much freedom of action as has been stated, which, however, they are beginning to exercise at Harvard. I think Dr. Eliot made a grave mistake when he allowed young men to select whatever they wanted to study. We should not go too far in that direction. When a young man has lost sight of a subject which he ought to know in the future, he will never study it so easily and earnestly as if he had stuck to it from the beginning. We must take the honey from where it comes, and enjoy it, but we must never forget that we are Americans and not Europeans. We have American boys and not European boys to deal with, and they want different treatment very frequently.

(To be continued)

Medical Education and State Boards of Registration

COMING EXAMINATIONS

CONNECTICUT: Regular, City Hall, New Haven, March 11. Sec., Dr. Charles A. Tuttle, 196 York St.; Homeopathic, New Haven, March 11. Sec., Dr. Edwin C. M. Hall, 82 Grand Ave.; Eclectic, New Haven, March 11. Sec., Dr. Thomas S. Hodge, 19 Main St., Torrington.

IOWA: Lincoln School Building, Des Moines, March 4-6. Sec., Dr. Guilford H. Sumner, State House.

MAINE: City Hall, Portland, March 11-12. Sec., Dr. Frank W. Searle, 776 Congress Street.

MASSACHUSETTS: State House, Boston, March 11-13. Sec., Dr. Edwin B. Harvey, Room 159, State House.

WYOMING: State House, Cheyenne, March 5-7. Sec., Dr. A. B. Tonkin, Riverton.

Reorganization of the Medical Faculty of the University of Minnesota

Reorganized and condensed with the sole idea of obtaining a more dynamic system of teaching, the faculty of the medical school of the University of Minnesota will begin working on an entirely new basis next fall. The faculty list, compiled after a month of consultation and work by President George E. Vincent of the university, Dean F. F. Wesbrook of the medical school and a committee of faculty members and physicians, has been approved by the board of regents. The present faculty all voluntarily resigned in order to make the reorganization possible, but will continue until the close of the present school year.

Under the reorganization, it is stated, there will be eight departments in the medical school with one professor at the head of each. Under each department will be divisions with associate professors in charge. The reorganization consisted in:

1. Abolishing the title of clinical professor and instructor.
2. Reducing the number of men engaged in clinical work from 120 to 77.
3. Appointing several professors as emeritus professors.
4. Combining several departments under one head.
5. Abolishing the department of chemistry as a department of the medical school.
6. Creating the position of assistant to the dean and secretary to the administrative board.
7. Organizing an administrative board consisting of the dean, heads of departments and the superintendent of the university hospital.

Not all the heads of departments have been appointed yet, the positions being left open so that the dean and the president can work out the best possible teaching system. The heads of departments thus far chosen are: dean of the school, Dr. Frank F. Wesbrook; department of pathology, Dr. H. E. Robertson, associate professor, acting head in charge; department of public health and bacteriology, Dr. F. F. Wesbrook; department of medicine, Dr. Charles Lyman Greene; department of obstetrics, Dr. Jennings C. Litzenberg; department of surgery, Dr. James E. Moore.

Dr. Thomas G. Lee, who has been head of the department of anatomy, will be professor of embryology and of comparative surgery. Dr. Richard Olding Beard, former head of the department of physiology, is to be assistant to the dean.

Under the department of medicine will be the divisions of mental and nervous diseases, with Dr. Arthur S. Hamilton in charge, and the division of pediatrics, with Dr. J. P. Sedgwick in charge.

Under the department of surgery will be the eye, ear, nose and throat division, with Dr. Frank C. Todd in charge, and the division of orthopedia, with Dr. Arthur J. Gillette in charge. No chief of the division of dermatology and genito-urinary diseases has yet been appointed.

This thorough reorganization of the medical faculty at the University of Minnesota is an example of what is needed in many other medical schools in this country. It is a step that could not have been taken a few years ago because then the dropping of certain members from a medical faculty would have meant the formation of another medical school. That it is possible now is a clear evidence of the public demand for better-trained physicians—a demand that will not tolerate the formation of new colleges, but asks for the further improvement of those now in existence.

Massachusetts November Report

Dr. Edwin B. Harvey, secretary of the Massachusetts Board of Registration in Medicine, reports the written, oral and practical examination held at the State House, Boston, Nov. 12-14, 1912. The number of subjects examined in was 13; total number of questions asked, 70; percentage required to pass, 75. The total number of candidates examined was 75, of whom 57 passed including 5 non-graduates and 4 osteopaths, and 18 failed including 4 non-graduates and 5 osteopaths. The following colleges were represented:

PASSED College	Year Grad.	Per Cent.
Howard University, Washington, D. C.	(1912)	79.8
Kansas Medical College	(1903)	76.6
Hospital College of Medicine, Louisville	(1904)	81.1
Medical School of Maine	(1910) 75.5; (1911)	78.7
Johns Hopkins University	(1911)	84
Maryland Medical College	(1910) 75; (1912)	75
Baltimore Medical College	(1902)	77.9
Tufts College Medical School	(1909) 77.3, 81.1; (1910) 77.9; (1911) 78, 79.5, 80.7, 83.1, 85; (1912) 75.8, 75.9, 76.6, 79.2, 79.8, 81.4, 81.8, 82.2, 83.	
Harvard Medical School	(1882) 78.7; (1895) 90; (1910) 78.7; (1911) 78.5, 81.9, 82.1; (1912) 75.	
College of Physicians and Surgeons, Boston	(1908) 75; (1910) 84.3; (1912) 75, 75.	
Dartmouth Medical School	(1911)	83.2
University and Bellevue Hospital Medical College	(1911)	80.4
University of Pennsylvania	(1912)	83.2
University of Vermont	(1909) 75; (1911)	76
Queen's University, Kingston, Ontario	(1910)	82.4
Laval University, Quebec	(1911)	75
McGill University, Montreal, Quebec	(1912)	80.5
University of Edinburgh, Scotland	(1909)	79.7
University of Würzburg, Germany	(1898)	75
University of Dorpat, Russia	(1887)	75
Non-graduates	75, 75.5, 78.7, 83.5, 85.7	

FAILED College	Year Grad.	Per Cent.
Howard University, Washington, D. C.	(1904)	67.1
National Medical University, Chicago	(1909)	44.5
Medical School of Maine	(1891)	58.7
Maryland Medical College	(1912)	67.4
College of Physicians and Surgeons, Boston	(1910)	65.6
University of Vermont	(1912)	63.7
Laval University, Montreal, Quebec	(1912)	71
University of Athens, Greece	(1898)	9.5
University of Naples, Italy	(1907)	*
Non-graduates	62.1, 68.8, 71.4, 71.9	

* Caught cheating.

New Hampshire December Report

Mr. H. C. Morrison, Regent of the New Hampshire State Board of Medical Examiners, reports the written examination held at Concord, Dec. 17-18, 1912. The number of subjects examined in was 7; total number of questions asked, 70; percentage required to pass, 75. The total number of candidates examined was 10, of whom 8 passed and 2 failed. Three candidates were licensed through reciprocity. The following colleges were represented:

PASSED College	Year Grad.	Per Cent.
Kentucky School of Medicine	(1906)	78
Medical School of Maine	(1912)	80
Johns Hopkins University	(1911)	88
Tufts College Medical School	(1898) 82; (1908)	75
Boston University	(1912)	85
Dartmouth Medical School	(1911) 85; (1912)	79

FAILED College	Year Grad.	Per Cent.
Maryland Medical College	(1912)	64
Dartmouth Medical School	(1910)	70

LICENSED THROUGH RECIPROCITY

College	Year Grad.	Reciprocity with
Gross Medical College	(1902)	Vermont
Harvard Medical School	(1903)	N. Dakota
Jefferson Medical College	(1878)	N. Carolina

The Condition of the Mouth as a Cause of Disease.—In searching the body for a possible common source of infection the mouth cannot but arrest attention. In almost every human being it is germ-ridden, and it is capable of infecting the body, either locally, or *vià* the intestinal tract.—C. Wynn Wirgman in *Clin. Jour.*

Book Notices

PHARMACOLOGY AND THERAPEUTICS FOR STUDENTS AND PRACTITIONERS OF MEDICINE. By Horatio C. Wood, Jr., M.D., Professor of Pharmacology and Therapeutics in the Medico Chirurgical College, Philadelphia. Cloth. Price, $4. Pp. 429, with illustrations. Philadelphia: J. B. Lippincott Company, 1912.

In preparing the new work on pharmacology and therapeutics, the author had in view the needs of the medical student, to whom the science of pharmacology is of value chiefly as affording a basis for practical therapeutics. For this reason the pharmacologic action is closely associated with the therapeutic uses of the various drugs, while the facts of materia medica are stated in separate sections, so that the book can be used in successive years as a text-book of materia medica and later as a text-book of pharmacology; if such a separation is deemed desirable. The arrangement is intended to follow as nearly as possible the classification based on therapeutic uses. This leads to some strange associations; for instance, we find the compounds of bismuth and cerium oxalate classified as counterirritants and set between cantharides and chromic acid. The critical judgment of the author as a student of pharmacology is shown in the practical rejection of a number of drugs, formerly in use, on the ground of lack of therapeutic effect. Among these may be mentioned lithium, cerium oxalate, triticum, senega and others.

An important feature of the work is the introduction of general articles describing such methods of treatment as treatment of acute bronchitis, practical anesthesia, treatment of chronic heart disease, etc. A brief mention is made of some of the well-established proprietaries such as the substitutes for cocain, the proprietary hypnotics, etc. The book is well adapted to the use of the student and teacher of pharmacology and therapeutics.

AN INTRODUCTION TO THE STUDY OF INFECTION AND IMMUNITY. Including Chapters on Serum Therapy, Vaccine Therapy, Chemotherapy and Serum Diagnosis for Students and Practitioners. By Charles E. Simon, B.A., M.D., Professor of Clinical Pathology at the College of Physicians and Surgeons, Baltimore. Cloth. Price, $3.25 net. Pp. 301, with illustrations. Philadelphia: Lea & Febiger, 1912.

The great importance of a knowledge of immunity to the practicing physician, and the multiplicity of the facts bearing on this subject derived from recent experimental and clinical work make a complete treatise on the new science opportune. That this work has found in Dr. Simon a competent author goes without saying. The subject has been systematically developed in such a way that the reader becomes gradually acquainted with the new conceptions and phenomena and their accompanying new terminology. The latter half of the volume is devoted to the practical consideration of immunity in various diseases. Good directions are given for the preparation and use of autogenous and other vaccines. The methods of diagnosis depending on immunity reactions are also discussed. The work thus possesses, in addition to the work of its theoretic explanations and discussions, an immediate practical value in that its possession makes it unnecessary for the practitioner to provide himself with a number of special technical laboratory manuals.

THE BLOOD. A Guide to Its Examination and to the Diagnosis and Treatment of Its Diseases. By G. Lovell Gulland, M.A., B.Sc., M.D., Physician to the Royal Infirmary, Edinburgh, and Alexander Goodall, M.D., F.R.C.P.E., Lecturer on Physiology, Royal College of Physicians, Edinburgh. Cloth. Price, $5. Pp. 344, with 32 illustrations. New York: E. B. Treat & Co., 1912.

The present work endeavors to combine the results of laboratory work with that of clinical experience. It covers not only methods of diagnosis, but also pathology and treatment of the various diseases of the blood. In addition, the condition of the blood in other diseases receives a brief description. The authors have had much experience in teaching the subject, and the volume bids fair to be of great practical utility. The book is illustrated by a large number of colored plates showing with beautiful clearness the appearance of the blood in various conditions.

FORENSIC MEDICINE AND TOXICOLOGY. By C. O. Hawthorne, M.D., Fellow of the Royal Faculty of Physicians and Surgeons of Glasgow. Cloth. Third Edition. Price, $1.70 net. Pp. 344. New York: Longmans, Green & Co., 1912.

This is a brief, concise statement covering the subjects of medical jurisprudence and toxicology together with a list of poisons and their antidotes and an outline of method of treatment of each. The book gives neither a bibliography nor a statement of cases illustrating the different points. It is merely a clear statement of what has been determined in the courts (particularly in the English courts) to be the law on the various medicolegal points that have heretofore arisen, and should prove convenient and satisfactory to the student, who will not be confused by a lengthy statement of more or less conflicting legal decisions on any question.

MENTAL DERANGEMENTS IN INDIA. Their Symptoms and Treatment; Being a Handbook to the Theory and Practice of Mental Disease in India, Together with Notes Dealing with the Legal Aspect of Insanity and the Various Questions Likely to Arise Concerning It. By A. W. Overbeck-Wright, M.B., Ch.B., Med. Psych. Cert. Cloth. Price, 9 shillings net. Pp. 366. Calcutta: Thacker, Spink & Co., 1912.

From the title, one might expect to find this book peculiarly related to India. This, however, is not the case. Aside from some peculiarities in legal relations of insanity, it consists of a brief treatise on the theory and practical treatment of insanity.

Medicolegal

Practicing Medicine Without License Not a Continuing Offense

(State vs. Colner (Kan.), 127 Pac. R. 1)

The Supreme Court of Kansas holds that the statute of that state providing that any person who shall practice medicine in the state without having received and recorded a certificate from the state board of registration and examination shall be deemed guilty of a misdemeanor, and on conviction thereof shall pay a fine of not less than $50 nor more than $200, does not create a continuing offense involving a general course of customary conduct, but penalizes each specific act of practice defined in the preceding section.

The court says that the act of that state, relating to medical registration and examination, is one of a series devoted to the conservation of the public health. Among them is the act creating boards of health, state and local, and conferring on them extensive powers and duties, the pure food law, acts relating to vital statistics, epidemics and quarantine, the analysis of food products, nuisances, water-supply and sewage, tuberculosis, and dangerous diseases, the pharmacy act, and some others. Several of these statutes make onerous requirements of the members of the medical profession in the interest, not of their patients for the time being, but of the public welfare; and it is a matter of general concern that the persons who are to be responsible for the discharge of these obligations should be known, and that their qualifications to render the public service demanded of them should be ascertained. Beyond this, the state is especially interested in the protection of sick people from empiricism and from charlatanry; from the quack who is ignorant of healing, and the faker who is an adept at swindling. Consequently the legislature has provided that any one proposing to practice medicine must apply to the state board of medical registration and examination for leave, prove his qualifications, obtain a certificate of authority, and register it in the county of his residence, before assuming the duties and exercising the privileges of a physician. Should he undertake to practice medicine without a certificate, he is guilty of a crime and liable to punishment.

The subject is of such moment and gravity, and the legislature has dealt with it so carefully and so seriously, that a plea that the taking out of a certificate had been inadvertently overlooked would be an affront. Unless he be of weak mind, whoever ignores the statute does so wilfully, and without any reason to expect acquiescence or toleration on the part of the authorities. Enforcement of the law is not left to

private initiative or the prompting of mercenary motives. That duty is expressly enjoined on the secretary of the board of registration and examination, and all other law officers may be expected to cooperate, as in other cases of infractions of the criminal law. A prosecution is not a mere admonition to take out a certificate, or else desist from practice. Its purpose is punishment. Dilatoriness in the commencement of proceedings, to the extent that they may result in oppression, is not to be anticipated.

The statute has not remitted us to any general understanding of the meaning of the word "practice." By virtue of the legislative definition, to prescribe, for a fee, any drug for the relief of any disease of another person is to practice medicine. It is not necessary that this be done frequently, customarily, or habitually. One isolated instance is sufficient, and the penalty is affixed to each offense. The same is true of surgical operations and other specific acts denounced by the statute. Beside this, any fair consideration of the mischief which the legislature sought to remedy leads to the conclusion that the State Board of Medical Registration and Examination was not created for the simple purpose of attaching its badge to professional careers. The life, health and financial resources of individual men, women and children were to be protected from ignorance and imposture. Each act of unlicensed practice may be fraught with danger. Every repetition is a new peril, and, instead of applying to a continuous course of conduct, the statute specifies and condemns each impulse, to the very end that it may not unite with others in swelling a common stream of action. If the statute be drastic, because the offense may be committed against each patient practiced on, the fact may afford ground for amending the act.

When the defendant opened an office with a doctor's sign over the door, he established a place, the criminal consequence of which merely persisted. Any attempt to split up this persistence into distinct periods of time would be purely arbitrary. But there is nothing arbitrary in taking separate account of the separate cases of the different individuals treated by the defendant on a given date.

Current Medical Literature

AMERICAN

Titles marked with an asterisk (*) are abstracted below.

Albany (N. Y.) Medical Annals

February, XXXV, No. 2, pp. 63-124

1 *Exophthalmic Goiter and Perverted Thyroid Secretion; and Their Treatment with High-Frequency Electricity. W. G. Lewi, Albany.
2 Electricity in Uric-Acid Diathesis. E. A. Bartlett, Albany.
3 High-Frequency Current in Treatment of High Blood-Pressure. H. Van Rensselaer, Albany.
4 *General Treatment of High Blood-Pressure. S. L. Dawes, Albany.
5 *Clinical and Pathologic Report of a Case of Primary Malignant Disease of Pleura. H. S. Bernstein, Albany.

1. **Exophthalmic Goiter and Perverted Thyroid Secretion.**—In Lewi's opinion all cases of exophthalmic goiter and perverted thyroid secretion, excepting those due to definite tumors, degeneration or inflammation, are caused by a toxemia or irritation of the sympathetic nerve system. Treatment of such cases with high frequency electricity, he says, gives better and more permanent results than any other method of treatment, except where a resort to surgery is imperative. Such treatment has no effect on enlargement of the thyroid due to definite tumor or cyst, although the differentiation between enlargement due to a definite tumor, and colloidal enlargement is so difficult and uncertain in most cases that a resort to high frequency treatment, preliminary to operation, would be justifiable and conservative. In all cases of exophthalmic goiter and perverted thyroid secretion in which an operation is to be performed, Lewi says the patient should have, as a preliminary to operation, a course of high frequency treatment, to the end that the distressing symptoms, especially the tachycardia and nervousness, may be lessened if not altogether relieved and securing for the patient the best condition possible for surgical procedure.

4. Abstracted in THE JOURNAL, Aug. 3, 1912, p. 396.

5. **Malignant Disease of Pleura.**—Bernstein's case is that of a woman, aged 69. The family history was negative. Her past history was likewise negative, save for suspected "lung trouble" twelve years previously; from this condition, however, a good recovery had been made. The last illness dated back two months before she came under observation. The chief complaint was that of dyspnea on exertion, and neuralgic pains radiating from the left side of the chest. Walking up-hill or upstairs or walking too far was accompanied with palpitation of the heart and dyspnea. In addition, the patient had become irritable, and although she had kept her usual weight, there had been a marked loss in strength. Cough was absent. On Dec. 29, 1911, the first physical examination gave signs of fluid within the left chest. The temperature and pulse were normal. Thoracentesis yielded 12 ounces of a dark straw-colored fluid. A similar fluid was withdrawn on three subsequent occasions. There had been meanwhile no elevation of temperature and pulse.

Physical examination after the last tapping was as follows: Patient was emaciated, and of a sallow complexion. Respirations were rather rapid and superficial. The left chest was more prominent than the right and motionless. The right border of the heart extended one finger's breadth outside of the right sternal margin. The cardiac area was otherwise undeterminable. The apical sounds, however, were audible well within the mammary line. The left chest anteriorly was flat to the sixth rib. Breath and voice sounds were absent over this area. Posteriorly, dulness extended over the left chest. The respiratory sounds were transmitted, but faint; and the expiration was high-pitched and prolonged. Râles were absent. Over the lower half of the chest, whispered voice was to be heard and spoken voice possessed a nasal quality. Tactile fremitus was diminished. The respiratory sounds in the right chest were exaggerated and harsh. Other observations were negative.

Death came three and a half months after the onset of symptoms. The right pleural cavity had a few firm interlobar adhesions. Its surfaces were otherwise normally smooth, moist, and glistening. The left pleural cavity contained about two liters of a turbid straw-colored fluid with numerous flocculi. The surfaces were dull and lusterless. The parietal pleura was everywhere thickened, averaging 0.5 cm. on section. It was of a tough, leathery consistence and greyish in color, presenting a trabeculated appearance. Scattered about were discrete nodular thickenings, varying from 0.5 to 1 cm. in diameter. A few of these presented a cauliflower-like growth. They were more numerous on the diaphragmatic and on the anterior parietal pleura. One nodule, at the level of the second rib, anteriorly, extended to the visceral layer and into the lung, causing a marked puckering of the lung substance. The area of extension measured approximately 2 by 1.5 cm. The tumor on histologic examination was pronounced a lymph-endothelioma.

American Journal of Obstetrics and Diseases of Women and Children, York, Pa.

February, LXVII, No. 422, pp. 217-432

6 *When Is High Forceps Operation Justifiable? J. A. Harrar, New York.
7 *Application of Iodin to External and Internal Generative Organs of Women. J. W. Boveé, Washington, D. C.
8 Cesarean Section; Discussion of Twenty-One Cases. S. P. Warren, Portland, Maine.
9 Cesarean Section in Achondroplastic Dwarf. F. J. Taussig, St. Louis.
10 *Pulsations Observed in Primitive Cardiac Tube of Human Embryo in Second Week. W. F. Armann, Ritzville, Wash.
11 Infant Pulmotor: Apparatus for Artificial Respiration on Asphyxiated New-Born. J. C. Edgar, New York.
12 Diagnosis of Extra-Uterine Pregnancy. G. B. Miller, Washington, D. C.
13 Immediate Treatment of Depressed Fractures of Skull in New-Born. G. W. Kosmak, New York.
14 Gilliam Operation for Uterus Suspension. E. J. Ill, Newark, N. J.
15 *New Surgical Procedure for Retrodisplacements of Uterus. S. H. Buteau, Oakland, Cal.

16 Some Diagnostic Pitfalls in Abdominal Surgery. E. W. Hedges, Plainfield, N. J.
17 *How Does Laparotomy Cure Tuberculous Peritonitis? H. O. Pantzer, Indianapolis, Ind.
18 *Ureteral Injuries. H. E. Hayd, Buffalo.
19 *Metrorrhagia Due to Atheroma of Uterine Vessels. A. T. Jones, Providence, R. I.
20 *Indications and Technic in Gastric Resection and Gastro-Enterostomy. G. W. Crile, Cleveland.
21 Large Calcareous Fibroid with Absence of Ovaries and Uterine Ligaments. J. W. Poucher, Poughkeepsie, N. Y.
22 *Ileosigmoidostomy for Colonic Stasis. C. L. Bonifield, Cincinnati.
23 Uterus Septus with Hyperemesis Gravidarum, Interruption of Pregnancy at Three and One-Half Months, Followed by Peritonitis. W. Yates and P. F. Morse, Detroit, Mich.
24 *Stenosis of Pylorus in Infancy. J. W. Keefe, Providence, R. I.

6. **When is High Forceps Operation Justifiable?**—The high forceps operation is always considered a major operation by Harrar, one to be performed only by the trained obstetric operator. It is never to be selected before labor as the ultimate operation; in other words, it is not an elective operation. High forceps is preferable to version in the treatment of dystocia due to contracted pelvis. Before applying the forceps to the floating head, the operator must be assured that the head can be made to engage in the brim of the pelvis with suprapubic pressure properly directed. If in a contracted pelvis the head will not thus catch or bite in the brim, and if there is distinct overlapping, it is almost certain that it cannot safely be delivered with forceps, except with the aid of pubiotomy, and finally, situations do arise in which it is justifiable to apply forceps to the head above the brim: (1) In normal pelves, in delayed dry labor when interference becomes urgent on account of the condition of the mother or child; (2) in deformed pelves of medium degree, when it is possible, with one or two moderate pulls to draw the largest diameters of the head through the pelvic inlet.

7. Abstracted in THE JOURNAL, January 11, p. 151.

10. **Pulsations in Primitive Cardiac Tube.**—In a case of abortion occurring six weeks after the last menstruation an intact ovum as large as a hazelnut, of light gray color and with well-developed chorionic villi was secured by Armann. The sac was opened with a pair of scissors and he observed distinct pulsations in the primitive heart. The embryo was 2.5 mm. long and the yolk sac was distended and as large as a lentil. The well-marked rhythm of the heart was noteworthy and Armann was able to count ninety pulsations per minute. The cardiac tube was as large as the head of a pin and no auricle or ventricle could be determined. The contractile movement continued for at least fifteen minutes without interruption, but after this became less distinct, slower, more superficial and lasted only about five minutes longer before it disappeared entirely. The specimen was placed in alcohol and subsequently measured and compared with the plates in Kollman's embryology. It was found that the specimen corresponded in size to an embryo of about fourteen days, which agreed with the history given by the patient.

15. **Retrodisplacements of Uterus.**—Buteau describes his operation as follows: After finishing all other work in the abdomen, pick up the round ligament with a small volsellum or forceps. Gentle traction will make the ligament taut and thus direct the finger to the internal abdominal ring. With the finger outlining the ring, the arched fibers of the transversalis muscle can readily be felt above. At this point, just above the tendon of the round ligament, a suture of whatever material determined on is introduced on a curved needle, from below upward, sufficiently deep to secure a good bite of the transversalis muscle. This suture is now anchored and will include peritoneum, transversalis fascia and muscle. External pressure over the internal ring will facilitate this step of the operation. The peritoneal coat of the distal end of the round ligament is now pierced and a continuous suture, subserous chiefly, is run parallel with the round ligament up to ¼ inch of its uterine attachment. The broad ligament is then pierced a short distance from the uterus beneath the ovarian ligament. This ligament may readily be included in the suture in such a way as to take up its slack, if prolapsus of the ovary is present. The needle is then made to enter the posterior wall of the uterus just beneath the serous coat, passing slightly downward and inward to the median line. This procedure is carried out in like manner on the opposite side. The two free ends of the suture are now tied with a single knot and sufficient tension is made to produce the degree of anteflexion required. The knot is now made secure.

17. **How Does Laparotomy Cure Tuberculous Peritonitis?**—It is suggested by Pantzer that the effects of a laparotomy for peritoneal tuberculosis must be associated with the active absorption, from the abdomen, of fluids engendered by the disease itself. He is inclined to regard such fluids found in the abdomen of these cases, as consisting of an autogenous tuberculin, associated or not, with antibodies.

18, 19, 20, 22 and 24. Abstracted in THE JOURNAL, Oct. 5, 1912, pp. 1316 and 1317.

American Journal of Public Health, New York

January, III, No. 1, pp. 1-100

25 Health Departments and Housing. C. B. Ball, Chicago.
26 Room Overcrowding and the Lodger Evil. L. Veiller, New York.
27 *Deaths from Tuberculosis in Fifth Ward (Philadelphia) During Period of Fort-Seven Years. F. A. Craig, Philadelphia.
28 The 37° Bacterial Count. G. C. Whipple, Washington, D. C.
29 Experiences with Stokes' Bile Media for Sending Cultures to Laboratories. J. P. Simonds, Galveston, Tex.
30 *Toxicity Studies with Coal-Tar Disinfectants. W. Hale, Washington, D. C.
31 Plague-Like Organism from Rat. J. F. Anderson and A. J. McLaughlin, Washington, D. C.
32 Limitations of Phenol Coefficient in Standardization of Disinfectants. E. B. Phelps, Boston.
33 Common House Roach as Carrier of Disease. R. C. Longfellow, Toledo, Ohio.
34 Bacteriologic Examination of Foods, with Special Reference to Gelatin. S. C. Prescott and C. A. Magoon.
35 Pathologic Dangers to Domestic Animals from Contaminated Streams. H. N. Parker, Champaign, Ill.
36 Methods Employed and Results Obtained in Improving Milk-Supply of Springfield, Mass. J. A. Gamble, Springfield, Mass.

27. **Deaths from Tuberculosis.**—Of the 2,248 deaths which Craig investigated, 353 or 15.7 per cent. of the total number, occurred within a period of four years following a previous death in the same house. This does not include the primary case, but only the subsequent cases. In other words, 15.7 per cent. of all the deaths in forty-seven years were possibly due to house infection. Of the 353 cases, 62 were apparently related. Of the 540 cases occurring in houses in which a previous death had occurred 65.3 per cent. of them came within the four-year period. During forty-seven years 14.4 per cent. of all the houses in the ward or 18.4 per cent. of all the houses in which a death from tuberculosis occurred contained 15.7 per cent of all the deaths which could be possibly due to house infection or infection in the house. Of the 182 deaths in children, fifty-two or 28.6 per cent. occurred in a house in which a patient had died within a period of four years with tuberculosis. In twelve instances they appeared to be related to the previous case. In the children the highest percentage of deaths occurred in the same year, while in the adults in the following year. This Craig explains by the longer duration of disease in adults as compared to the children in which it runs a relatively rapid course. He concludes that a large percentage of the deaths from tuberculosis occurs in a relatively small percentage of the houses, and that in tuberculosis house infection must be considered as one of the most fruitful sources of infection, and should, therefore, be made the object point of any attack on the disease.

30. **Toxicity Studies with Coal Tar Disinfectants.**—Hale found that the coal tar disinfectants of the phenoloid group are considerably less toxic than either phenol or the cresols, but they are not harmless, non-poisonous substances and on an average have a toxicity equal to about 20 per cent. phenol. Manufacturers and retailers accordingly should be required to revise present labels and to designate such products as toxic by the use of suitable poison labels. Until this is done, Hale advises that physicians and health officials who recommend disinfection should warn the general public of the danger of such solutions and urge on it greater care in storage than is now common practice.

Archives of Pediatrics, New York

January, XXX, No. 1, pp. 1-80

37 *Inflammatory Affections of Nasal Accessory Sinuses in Children. S. Oppenheimer, New York.
38 Nervousness in Children: How to Prevent It. T. A. Williams, Washington, D. C.
39 Relation to and Influence on Respiration During Childhood of Normal and Abnormal Dental Arches. A. Zentler, New York.
40 Feeding in Relation to Teeth. G. C. Kusel, Philadelphia.
41 Dental Prophylaxis. P. B. McCullough, Philadelphia.
42 Relation Between Abnormal Breathing and Malocclusion. S. M. Weeks.

37. **Inflammatory Affections of Sinuses.**—It has been Oppenheimer's experience that in young children radical external operative procedures for the relief of purulent sinusitis are rarely indicated and are not as productive of satisfactory results as the more conservative intranasal procedures, and while the same may be said of older children, yet in such, when the sinuses approach the adult type, the same indications for treatment and the same operative procedures apply as in the adult.

Arizona Medical Journal, Phoenix

January, I, No. 3, pp. 1-77

43 Sanatorium Treatment of Tuberculosis. L. S. Peters and E. S. Bullock, Silver City, N. M.
44 Practical Significance of Diagnostic Tuberculin Reaction. W. C. Klotz, Douglas.
45 Tuberculosis: Disease of the Individual. W. W. Watkins, Phoenix.
46 Strabismus Question. H. H. Stark, El Paso, Tex.
47 Diagnosis and Treatment of Some Surgical Diseases of Stomach. C. P. Thomas, Los Angeles, Cal.
48 Physiologic Antidote to Phenol Poisoning. H. A. Reese, Bisbee.

Boston Medical and Surgical Journal

February 13, CLXVIII, No. 7, pp. 221-260

49 Diseases of Middle Ear and Mastoid Cells, Based on Study of 454 Autopsies and 2,232 Cases of Diphtheria, Scarlet Fever and Measles. C. B. C. Borden, Boston.
50 Diagnosis of Feeble-Mindedness Among Immigrants. J. G. Wilson, New York.
51 Persistent Mouth-Breathing Following Adenoidectomies. I. Sobotky, Boston.
52 Retrograde Catheterization in Ruptures of Urethra. C. G. Cumston, Boston.
53 Teeth and Their Relation to the Body. G. H. Wright, Boston.
54 Oral Prophylaxis. H. W. Adams, Boston.
55 Purpose of Forsyth Dental Infirmary. T. Leary, Boston.
56 Scientific, Economic and Social Program of Forsyth Dental Infirmary. H. D. Cross, Boston.
57 School Inspection and Dental Caries. W. J. Gallivan, Boston.

Bulletin of Johns Hopkins Hospital, Baltimore

February, XXIV, No. 264, pp. 33-68

58 *Spirochetosis. G. H. F. Nuttall, Baltimore.
59 *Hypophysis in Metabolism of Carbohydrates: Autonomic Control of Hypophysis Cerebri. L. H. Weed, H. Cushing and C. Jacobson, Boston.
60 *Induced Pneumothorax in Treatment of Pulmonary Disease. L. Hamman and M. F. Sloan, Baltimore.

58. **Spirochetosis.**—There are represented in the blood-inhabiting spirochetes of warm-blooded animals, says Nuttall, a group of microorganisms which, under natural conditions, are mainly conveyed by blood-sucking ectoparasites within which they undergo a process of development and in which they are hereditarily transmitted. Spirochetes are not specialized parasites. Infection may take place through the skin or mucous membrane to which the spirochetes gain access by being deposited thereon in the arthropod's dejecta or by the infested individual scratching or rubbing himself with hands which have become contaminated with the contents of the vermin which they have crushed. The lesions produced by the bites of the arthropods and the excoriations inflicted on the individual by himself greatly facilitate the entrance of the spirochetes.

59. **Hypophysis in Metabolism of Carbohydrates.**—From the results of the experiments cited by the authors it is fair to assume the existence of a nervous control on the part of the sympathetic system over one form at least of the secretory activities of the hypophysis. The particular function of the gland—and presumably of its posterior lobe—concerns the elaboration and discharge of a substance capable of evoking glycogenolysis. Provided there is a storage of glycogen available for discharge; a piqûre of the hypophysis in the rabbit is comparable, in its glycosuric response, to a piqûre of Bernard's so-called sugar center in the fourth ventricle. Stimulation of the superior cervical ganglion, by faradization or even by the manipulations necessary for its exposure, causes glycosuria in the rabbit, cat and dog. Stimulation of the superior cervical ganglion after separation of all synapses of the sympathetic system by administration of nicotin, causes glycosuria. Direct faradic stimulation of the hypophysis itself, after exposure by a transphenoidal operation, gives glycosuria even after preliminary transection of the spinal cord and cervical sympathetic trunks. If the posterior lobe of the hypophysis has previously been removed by operation the usual stimulation of the superior cervical ganglion fails to give glycosuria. Direct faradic stimulation of the hypophysis provokes glycosuria even after transection of the spinal cord above the splanchnics. A Bernard piqûre will likewise cause glycosuria even after transection of the spinal cord above the splanchnics. The authors conclude, therefore, that the hypophysis and more particularly its posterior lobe, plays a significant rôle in the metabolism of carbohydrates, and its action in this respect is under the control of fibers which reach the gland by way of the superior cervical sympathetic ganglion. Stimulation of this nervous pathway at the so-called sugar center in the fourth ventricle, at the superior cervical ganglion, and by excitation of the hypophysis itself, liberates a chemical substance which causes glycogenolysis and glycosuria, independent of any possible nervous impulse reaching the glycogen-holding cells of the muscles or abdominal viscera.

60. **Induced Pneumothorax in Pulmonary Disease.**—Induced pneumothorax is pronounced by the authors to be a harmless procedure and the operation, carefully performed, is without danger. In three out of twenty cases it was impossible to produce any pulmonary collapse owing to general pleural adhesions. Of sixteen cases in which pneumothorax was successfully produced, in but seven was the pneumothorax complete. Of nine cases with induced pneumothorax existing for four months or longer four have developed pleurisy with effusion. The pneumothorax has, in most instances, an immediate and striking influence on the cough and expectoration. Tubercle bacilli may disappear from the sputum. Constitutional symptoms abate more slowly. In most instances there is at first a loss in weight followed by a gradual rise. The total collapse of one lung causes surprisingly little inconvenience. Usually there is but slight dyspnea on exertion. Many of the patients with an induced pneumothorax assist actively in the work about the sanatorium. The procedure is of great value in the treatment of pulmonary hemorrhage. While they believe that induced pneumothorax will never become a routine method for the treatment of pulmonary tuberculosis, still in selected cases it offers a prospect of temporary and permanent relief when the usual methods of treatment have been unsuccessfully tried. Quiescent lesions in one lung with acute recrudescence in the other are the most favorable for the treatment. Its use need by no means be limited to strictly unilateral lesions, but when there is advanced disease of both lungs little benefit can be expected. It would seem advisable not to withhold the treatment until the patient is hopelessly advanced, but to apply it judiciously to suitable moderately advanced patients in whom the disease tends to progress in spite of appropriate treatment.

California State Journal of Medicine, San Francisco

February, XI, No. 2, pp. 39-96

61 Tonsils and Adenoids: Their Significance. G. H. Kress, Los Angeles.
62 Operative Treatment for Tic Douloureaux of Inferior Dental Nerve. C. G. Levison, San Francisco.
63 Some Factors in Habitual Constipation. R. Russ, San Francisco.
64 Feeding in Later Infancy. H. H. Yerington, San Francisco.
65 Dietetics from Modern Standpoint. A. W. Williams, Hayward.
66 Case of Lipectomy (Abdominal). H. E. Castle, San Francisco.
67 Case of Double Tubal Pregnancy. D. Hadden, Oakland.
68 Technic of Removal of Foreign Bodies and New Growths from Esophagus. W. P. Millspaugh, Los Angeles.

69 Prophylactic Measures for People Growing Blind in Later Life. S. Heller, Hohe Warte, Wien.
70 Gasserectomy. J. H. Barbat, San Francisco.

Canadian Medical Association Journal, Toronto

February, III, No. 2, pp. 87-166

71 *Diagnosis and Treatment of Subacute and Chronic Pancreatitis. E. Archibald and E. J. Mullally.
72 Nature of Surgical Shock and Its Treatment. W. Webster.
73 Medical Inspection of Schools. H. MacMurchy, Toronto.
74 Toxic Effects of Gasoline Fumes. J. G. Johnson, Montreal.

71. **Subacute and Chronic Pancreatitis.**—Many of the attacks of acute pain in the upper abdomen, which pass off in a few hours or a few days, are believed by the authors to be due to a subacute swelling of the pancreas, and are often set down vaguely as acute gastritis, or gastric fever, or gastric ulcer, or are allowed to go without diagnosis. They examined the records of thirty-two cases of pancreatitis, acute and chronic, all of which were proved by operation or by autopsy. Gall-stones were present in only thirteen; and in only four of these thirteen was the stone in the common duct. The analysis of the symptoms leads Archibald and Mullally to the conclusion that the diagnosis is frequently not especially difficult, not nearly so difficult, for instance, as in the very acute cases with hemorrhage and necrosis. Of eleven cases in Archibald's service it was possible in seven to establish a reasonably sure diagnosis before operation.

The feature of outstanding importance is usually pain in the upper abdomen, recurring at irregular intervals. The situation of the pain is nearly always in the mid-epigastrium. It was so in eighteen of the twenty-one cases, while in three it is set down as being in the right upper quadrant. The sufferer from a gall-stone attack, on the request to place his hand over the site of pain, usually indicates the region of the upper right rectus or further outwards; while the victim of pancreatic swelling will almost invariably put his hand directly in the mid-line, or sometimes a little to the left. This is true except during the extremely acute phase of hepatic colic, when the pain is so severe that it frequently occupies indiscriminately the whole upper abdomen and cannot be referred to any one area in particular. But when the initial pain has somewhat subsided, the value of the localization indicated is considerable. Certain exceptions must be noted. Thus, the authors have been led into the error (chiefly by this sign) of diagnosing pancreatitis when the real lesion proved to be an acute interstitial cholecystitis, the gall-bladder occupying an unusual position close in toward the median line. The tenderness can frequently be elicited on the left side, as well as in the middle and a little to the right. It rarely extends more than 1 inch to the right, whereas in some cases, when the swelling affects the whole gland, the tenderness may be followed out nearly to the tail of the pancreas. The point of maximum tenderness is usually found to be exactly in the mid-line, from 1 to 2 inches above the umbilicus. Sometimes this maximum tenderness extends half an inch or an inch to the right, or an equal distance to the left. In the authors' opinion this is merely the result of the fact that the swelling of the pancreas occupies usually the head and isthmus of the gland, less often the tail, and also that in the mid-line the pancreas is nearest to the surface, and lies on the prominent bony bed of the vertebral bodies. While spontaneous pain referred to the epigastrium, being as it is of a subjective character, is notoriously of uncertain value in diagnosis, this sign of tenderness to pressure is of very much greater value, inasmuch as it is objective.

The radiation of pain has no regularity. The degree of pain is frequently characterized by its extraordinary severity. Its duration is very variable, being according to the severity of the attack. The recurrence of the attacks also varies widely. The incidence of pain in regard to the taking of food seems to be most uncertain. Like appendicitis, pancreatitis is typically relapsing. In five of these nineteen cases, the relapse ultimately took the form of the acute necrosing or hemorrhagic pancreatitis, ending in death. Chronic relapsing pancreatitis is therefore a dangerous disease, more dangerous certainly than appendicitis. The presence of palpable tumor is rare. The symptom of jaundice, in cases in which common duct stones are excluded, is of but moderate value in diagnosis. Vomiting is present as a rule; in three of the twenty-one cases it was absent. Rigidity is usually remarkable by its absence, or its slightness, except in the later stages of the more acute cases, when the peritoneum becomes involved. The treatment is surgical. A cholecystostomy is always indicated.

Cleveland Medical Journal

January, XII, No. 1, pp. 1-88

75 *Complement-Fixation Test in Gonorrhea. H. L. Rockwood, Cleveland.
76 *Present-Day Conceptions of Pathologic Physiology of Exophthalmic Goiter from Surgeon's Viewpoint. G. W. Crile, Cleveland.
77 Thyroid in Its Relation to Exophthalmic Goiter. D. Marine, Cleveland.
78 Vernal Conjunctivitis. R. B. Metz, Cleveland.
79 Actions of Caffein. P. J. Hanzlik, Cleveland.

75. **Complement Fixation in Gonorrhea.**—In a series of 193 tests a positive reaction for gonococcal antibodies was secured by Rockwood in no case in which the absence of a gonococcus infection was certain. Two cases in which a urethral infection had been present more than four weeks and in which the urethral discharge contained Gram-negative intracellular diplococci, at the time of test gave a negative reaction. In over 80 per cent. of cases in which the possibility of an active gonococcal infection was indicated, either by the bacteriologic findings or the history, the blood examination was positive. Of patients clinically cured over 80 per cent. gave a negative reaction, and in no case in which a negative reaction has been found has there been evidence of recurrence of the previous infection. In nearly all of the various clinical tests a certain amount of error is to be expected. The fixation test in gonorrhea is probably no exception. From the results obtained in this series of cases, however, it seems that this test has great value from a clinical standpoint.

76. **Surgical Aspects of Graves' Disease.**—Crile says that every case of Graves' disease should first be given rest, real psychic rest, diverting rest; and if not relieved then an early surgical operation will relieve or cure. If the operation is timely the result is almost certain; but, as in operations for cancer, if late, the result depends on the amount of preventable damage already done; surgery offers to forge one of the links, frequently an indispensable link, in the chain of cure.

Delaware State Medical Journal, Wilmington

January, IV, No. 2, pp. 1-26

80 Importance of Early Diagnosis and Prompt Action in Certain Conditions. G. L. McKelway, Dover.
81 Homeopathy: Past and Present. F. F. Pierson, Wilmington.

Illinois Medical Journal, Springfield

February, XXIII, No. 2, pp. 125-248

82 Goiter. C. H. Mayo, Rochester, Minn.
83 Plea for Improved Hygiene in Management of Surgical Tuberculosis. J. W. Pettit, Ottawa, Ill.
84 What Should Be Done with Tuberculous Puerperae and Their Children? C. S. Bacon, Chicago.
85 Examination of Employees for Tuberculosis. T. B. Sachs, Chicago.
86 Use of Tuberculin in Diagnosis and Treatment. W. H. Buhlig, Chicago.
87 *Inhalation Treatment: New Apparatus. H. M. Thomas, Chicago.
88 Bronchial Asthma. J. M. Patton, Chicago.
89 Carcinoma of Uterus in Non-Pregnant and Pregnant. A. B. Keyes, Chicago.
90 *Treatment of Hemorrhoids. W. Van Hook, Chicago.
91 *Duodenal Ulcer. E. B. Cooley, Danville, Ill.
92 Epilepsy and Crime; the Cost. W. Healy, Chicago.

87. **Inhalation Treatment.**—The benefits which Thomas thinks are established as a reason for the general use of antiseptic nebulae in the treatment of the respiratory tract are: (1) The respiratory capacity is increased. (2) The catarrhal condition of the air-passages is diminished, thereby aiding a better introduction of air into the lungs. (3) The pulmonary passages are kept in an aseptic condition and the danger of new bacillary invasion minimized. (4) The marked relief of cough and dyspnea. (5) The alimentary tract is undisturbed by drugs, giving ample opportunity for the increase of

vital resistance by suitable diet and constitutional treatment. Thomas is convinced that the treatment by the inhalation of antiseptic nebulae is rational and practical, and therefore he has designed a new apparatus which safely combines steam, sterilized compressed air and definite drug medication for treatment of the respiratory passages.

90. **Treatment of Hemorrhoids.**—The simplest operative procedure for hemorrhoids in Van Hook's opinion consists in excising the masses by oval incisions, the axes of the incisions being parallel with the sphincter muscle. The muscle need not be injured. The incisions are carefully closed by many interrupted catgut sutures. A dressing of heavy zinc oxid ointment is applied.

91. Abstracted in THE JOURNAL, June 8, 1912, p. 1777.

Iowa State Medical Society Journal, Clinton

February, II, No. 8, pp. 519-624

93 Practical Applications of Labyrinthine Studies. E. R. Lewis, Dubuque.
94 Arteriosclerosis. J. F. Clarke, Fairfield.
95 Etiology and Pathology of Arteriosclerosis. B. L. Elker, Leon.
96 *Use of Roentgen Ray in Diagnosis of Heart Disease. W. L. Bierring and T. A. Burcham, Des Moines.
97 Use and Comparison of Nasal Dressings. W. S. Windle, Oskaloosa.
98 Psychoneuroses and General Practitioner. F. G. Murphy, Sioux City.
99 *Subacute Combined Degeneration of Spinal Cord. C. Van Epps, Iowa City.
100 Office Business Methods. H. G. Langworthy, Dubuque.

96. **Roentgen Ray in Heart Disease.**—As a diagnostic aid, the authors have found that the Roentgen ray examination of the heart has a distinct value, but only as a supplement or adjunct to the other clinical methods of examination.

99. **Degeneration of Spinal Cord.**—Six cases have been studied by Van Epps. Two were women. The ages varied from 47 to 52 years. Only one had been an alcoholic and all gave no evidence of syphilis. In only one was there a family history of organic spinal cord trouble. Two of the patients were emaciated, three were fairly well nourished and one was well nourished. Diarrhea preceded or accompanied the nervous symptoms in four cases. The initial symptoms were numbness and tingling in the hands in two, in the feet in two cases and the others complained of persistent nausea, vomiting and gastric distress. The principal complaints were pain and weakness in the legs, staggering gait and bladder trouble. Of the three cases followed to death the duration was respectively 24, 26 and 36 months. Five were bed-ridden when first seen. Three developed in the latter half of the disease, marked mental symptoms, one being delirious at times, another became irritable with delusions and hallucinations and the third became confused, disobedient and untidy. The blood counts revealed a varied reduction in the reds ranging from 2,350,000 to 3,900,000, the whites from 4,400 to 9,200 and the hemoglobin from 37 to 56 per cent. by Sahli. In the two cases in which the morphology of the reds was noted moderate anisocytosis and poikilocytosis were found. The differential count of the whites revealed no marked variation. In four cases there was bladder trouble. In four cases the knee-jerks were increased and a Babinski was present in five. Sensory disturbances were present in five cases. Pallesthesia was most reduced, discrimination next, pain still less and tactile perception least of all. In two cases with complete loss of pallesthesia over the legs tactile perception was intact. Lumbar puncture in one case returned a normal cerebrospinal fluid. A post-mortem was obtained on the most typical case. Aside from the cord changes no definite pathology was found. The cord was removed up to the eighth cervical segment. The posterior lateral columns were involved throughout, most markedly in the mid-thoracic region. The principal change was a vacuolation due to destruction and absorption of the nerve fibers. This process was somewhat patchy and apparently began in the central portions of the columns referred to. A Marchi revealed a marked fat reaction showing the recent nature of the pathology. In the cervical cord the columns of Goll were involved in an ascending secondary degeneration. The blood-vessels were slightly distended. The meninges, anterior and posterior roots were normal. The cells of the anterior horns were normal but those of Clark's column were shrunken and indistinct. There was in no part evidence of an inflammatory reaction. The morbid anatomy suggests that the process is primarily a toxic destruction of the nerve fibers with secondary changes in related cells and tracts.

Journal of Cutaneous Diseases, New York

February, XXXI, No. 2, pp. 71-114

101 *Epithelioma of Lip. W. A. Pusey, Chicago.
102 Seborrhea of Lower Lip and Its Relationship to Epithelioma. D. W. Montgomery, San Francisco.
103 *Lingual and Oral Mucous Membrane Disturbances in Pernicious Anemia. F. Wise, New York.

101. **Epithelioma of Lip.**—Pusey is convinced, more than ever, that, used with attention to technic and with proper regard to their therapeutic indications the Roentgen ray is one of the most useful or the most useful single agent of treatment in the service of dermatology.

103. **Pernicious Anemia.**—Montgomery says that seborrheic lesions in their early stages almost always yield readily to treatment either with trichloracetic acid or with the Roentgen ray. Neglect of this seborrheic condition is deplorable, because attention to it may often prevent the occurrence of a cancer. And if a cancer has appeared, and has been removed by operation, attention to the seborrheic crusts may prevent a new one forming.

Kansas Medical Society Journal, Kansas City

February, XIII, No. 2, pp. 43-94

104 Tonsils and Adenoids. H. L. Scales, Hutchinson
105 Artificial Infant-Feeding. J. T. Scott, St. John.
106 Syphilis. M. K. Lindsey, Topeka.
107 Treatment of Lobar Pneumonia. X. Olsen, Clay Center.

Maine Medical Association Journal, Portland

February, III, No. 7, pp. 1175-1218

108 Present Status of Modern Obstetrics. E. Cragin, New York.
109 Obstetrics. P. W. Davis, Portland.
110 Use and Abuse of Digitalis. H. W. Sampson, Togus.

Medical Record, New York

February 15, LXXXIII, No. 7, pp. 277-322

111 *Centenarians and Nonagenarians. W. G. Thompson, New York.
112 Present Status and Future Scope of Thoracic Surgery. D. Stetten, New York.
113 Public Protection Against Mental Defectives in Paris. E. Castelli, New York.
114 Hodgkin's Disease. J. D. Morgan, Washington, D. C.
115 *Scarlet Fever; Is Desquamatory Stage Contagious? F. H. Mead, San Diego, Cal.
116 Associated Outpatients' Clinics of City of New York—A Social Force. E. H. Lewinski-Corwin, New York.
117 Indicanuria and Phosphates. J. C. Warbrick, Chicago.

111. **Centenarians and Nonagenarians.**—Reviewing this subject at great length, Thompson finds that there are many modern theories to explain extreme longevity on the basis of individual peculiarities, from the intestinal chronic toxemia idea of Metchnikoff to the functionless ductless gland idea of Lorand, particularly of thyroid failure, but no one theory appears applicable to a majority of cases. In many persons the attainment of nonagenarian age appears to be due chiefly to favorable environment, and freedom from harassing worries and poverty. They have not been buffeted by the world's cares and trials, and are blessed with serenity of mind and uniformity of function. On the other hand, longevity is about equally found among the struggling poor. A majority of nonagenarians give a history of long-lived ancestry, and there are many families remarkable for this characteristic, but it is not an essential one, by any means, for a line of such ancestry may be broken by intervention of infectious diseases or by the unhygienic or irrational habits of individuals.

All things considered, however, heredity appears to be a much stronger factor in producing nonagenarians than any special habits, as of diet or hygiene, for the latter are found to present the greatest variety in different cases—hence extreme longevity is largely a matter of natural selection. That the aged very often exhibit no predominating symptoms

of any one disease to which their death is attributable, is a striking fact. They may become so universally sclerosed and atrophic that a general weakness is their only complaint, and although they may have marked arteriosclerosis, nephritis, or myocardial change, the more active symptoms which characterize such diseases early in life may be entirely wanting. They rarely show marked edema, for example, and the typical picture of the last stages of failing compensation of the heart, so familiar in early life, the orthopnea, cyanosis, and general anasarca, etc., is very rarely met with. They die suddenly and peacefully—it is as if the clock had run down. Hence in the mortality statistics "senility" is so often given as the cause of death and accepted by the health authorities without further question.

115. **Scarlet Fever.**—Summarizing his own opinion on the matter Mead points out that statistics show that in only a very small percentage of cases do secondary cases of scarlet fever arise from exposure to desquamation. Only a comparatively small number of persons thus exposed catch the disease. In the very few cases which have developed from desquamation it is probable that the desquamation was infected from discharges from the nose, throat or ears.

Michigan State Medical Society Journal, Battle Creek

February, XII, No. 2, pp. 67-1\8

118 Altruism in Medicine. W. H. Sawyer, Hillsdale.
119 Every-Day Surgery. M. D. Bird, Marinette, Wis.
120 Roentgen Diagnosis of Diseases of Stomach. P. M. Hickey, Detroit.
121 Some Embryologic, Anatomic, Histologic and Clinical Facts Concerning Thyroid, with Suggestions as to Practical Application. M. F. Porter, Ft. Wayne, Ind.
122 Disturbances of Motor Functions of Stomach. B. A. Shepard, Kalamazoo.
123 Diagnosis of Traumatic Hysteria. H. B. Knapp, Ionia.
124 Ionization in Treatment of Superficial Epitheliomas. J. Solis, Ann Arbor.
125 Diagnosis of Tuberculosis in Infancy and Childhood. C. H. Johnston, Grand Rapids.

New Jersey Medical Society Journal, Orange

February, IX, No. 9, pp. \37-\90

126 Eugenics from Point of View of Ophthalmologist. C. P. Franklin, Philadelphia.
127 Syphilis of Nervous System. I. Surnamer, Paterson.
128 Treatment of Syphilis. G. Fischer, Paterson.
129 Acute Abdomen. W. Freile, Jersey City.
130 Sore Throat and Diphtheria. H. I. Goldstein, Camden.
131 Problem of Mental Deficiency in Its Relation to Medical Profession. L. M. Halsey, Williamstown.
132 Physical Defects in Their Relation to Penal Discipline. G. L. Orton, Rahway.

Oklahoma State Medical Association Journal, Muskogee

February, V, No. 9, pp. 391-\\0

133 Fatalities During and Immediately Following Labor. L. S. Willour, McAlester.
134 General Practitioner as Obstetrician and Gynecologist. J. B. Smith, Durant
135 Gastro Intestinal Disturbances Complicating Pregnancy. C. D. Blachly, Norman.
136 Uterine Reflexes. L. B. Torrance, Okmulgee.
137 Experiences in Early-Day Obstetrics Among Indians. D. Long, Duncan.
138 Diagnosis of Fevers Without Manifest Physical Signs. C. J. Fishman, Oklahoma City.

FOREIGN

Titles marked with an asterisk (*) are abstracted below. Single case reports and trials of new drugs are usually omitted.

British Medical Journal, London

February 1, I, No. 2718, pp. 205-26

1 Exotic Flora of Uterus in Relation to Fibroids and Cancer. J. Bland-Sutton.
2 *Atypical Exophthalmic Goiter. H. L. McKisack.
3 Portals of Entry of Tubercle Bacillus, Especially in Childhood. E. Emrys-Roberts.
4 *Varieties of Tuberculin in Treatment of Tuberculosis. N. Raw.
5 *"Controlled" Therapeutic Use of New Tuberculin in Treatment of Pulmonary Tuberculosis. E. E. A. T. Rigg.
6 Organic Acid Ratio of Urine After Tuberculin. A. H. Gregson.
7 A Year's Experience of Dioradin in Surgical Tuberculosis. A. Stoney.
8 Gastric Hemorrhage and Other Complications in Case of Childbirth. W. D. Sturrock.
9 Case of Cardiac Asthma. C. Wilson.

2. **Atypical Exophthalmic Goiter.**—McKisack suggests that the name "exophthalmic goiter" be as far as possible discarded and that the condition be spoken and thought of as "hyperthyroidism." This term would include all degrees of the abnormal condition, while the more usual description, "exophthalmic goiter," merely suggests two of the chief, but by no means the most constant, symptoms.

4. **Tuberculin in Tuberculosis.**—After treating over 600 patients with injections of tuberculin, Raw is convinced that it is a remedy of the greatest value, especially in early cases and when the deposit of tubercle is localized, as in one apex or in a lymph-node or single joint; but when the tuberculosis is disseminated and complicated by secondary infections the use of tuberculin cannot be expected to be of much avail. It ought, however, to be tried in every case with the hope of some relief or possible benefit, as we cannot allow the patient to suffer and die without making every effort to arrest the progress of the disease. Tuberculin is not going to revolutionize the treatment of tuberculosis. It is a valuable aid to the other methods of treatment, hence it must be used with care and discrimination and with a full knowledge of its dosage and therapeutic effects. The best treatment we can offer to-day to a person infected with tuberculosis is a prolonged open-air life, preferably in a well-conducted sanatorium, excess of nutritious food, gentle exercise followed by plenty of rest and a course of tuberculin by a careful physician.

5. **"Controlled" Therapeutic Use of Tuberculin in Lung Tuberculosis.**—Observations were made by Rigg on the comparison of afebrile cases of pulmonary tuberculosis treated for three months, half with tuberculin and half without the cases being compared at the beginning and end of this period. The net result of these observations is to show that the administration of new tuberculin by one of the more popular approved methods is not followed by greater improvement in the physical signs, nor by greater increase in weight, nor by more greatly increased capacity for physical work, nor by a greater improvement in the general condition, as compared with the results of ordinary hospital methods. The observations on the signs do not support the idea that tuberculin in any way lessens the activity of a local lesion. It is possible that the less favorable influence on weight, the less capacity for work and the falling off of the general condition are due to the disabilities imposed on the patient by being treated with tuberculin, as they so often were kept in bed to help restore the temperature to normal.

Indian Medical Gazette, Calcutta

January, XLVIII, No. 1, pp. 1-\4

10 History of I. M. S. D. G. Crawford.
11 Recent Research on Cholera in India. E. D. W. Greig.

Lancet, London

February 1, I, No. \666, pp. 297-36

12 *Malingering in Accident and Disease. J. Collie.
13 *Treatment of Syphilis with Salvarsan: First 1,000 Patients Treated at Royal Naval Hospital at Plymouth. L. Kilroy.
14 Case of Suppurative Post-Typhoid Osteitis Thirteen Years After Attack of Enteric Fever. A. H. Tubby and J. A. B. Hicks.
15 Progeria and Atelelosis. A. Keith.
16 New Growth and Inefficient Immunity. H. G. Grünbaum and A. S. F. Grünbaum.
17 Case of Infection in Man by Bacterium Prodigiosum. H. M. M. Woodward and K. B. Clarke.
18 Case of Old-Standing Dislocation of Hip-Joint Treated by Open Operation. A. Gibson.
19 Treatment of Recent Injury by Mobilization and Massage. J. B. Mennell.

12. **Malingering in Accident and Disease.**—The principal means by which Collie says malingering may be checked are: (1) A system of organized lay inspection; (2) repeated, periodical, independent medical supervision; (3) complete independence of the medical attendant; and (4) some system of registration which shall make apparent what is the full amount of sick-pay and other benefit, if any, that the patient is in receipt of.

13. **Salvarsan in Syphilis.**—At the Royal Naval Hospital, Plymouth, England, 2,147 injections were given to 1,000

patients with thirteen invalidings, no deaths and twenty-two clinical relapses readmitted to this hospital, two clinical relapses admitted to other naval hospitals and two occurring in ships, leaving out of consideration the salvarsan given after relapses. Of seventeen patients (five of whom had previously received salvarsan elsewhere) who received one dose of salvarsan there, no case has reached this hospital as a clinical relapse. Of 901 patients receiving two injections there, twenty-one have reached the hospital as relapses, two are known to have occurred in ships and two have been treated in other naval hospitals. Of sixty-eight patients receiving three injections, one case reached the hospital as a clinical relapse. One patient with relapse after two doses given elsewhere was treated by two further doses. Mercurial treatment is carried out in this hospital during the whole time the patient is an inmate. The only days on which mercury is not given are those on which the patients receive their injections of salvarsan. No salvarsan has been given to patients with (1) heart disease; (2) albuminuria; (3) diabetes; (4) advanced tabes; and (5) general paralysis of the insane. At least two doses are given to all patients unless some contra-indication presents itself. A third and more rarely a fourth dose is given to resistant cases. No deaths have occurred. So far about 50 per cent. of the patients who have been examined after having had salvarsan have given a negative Wassermann when examined three months later. The others are about equally divided into those whose Wassermann is not improving or getting worse. It is too early for precise details.

Practitioner, London

February, XC, No. 2, pp. 381-512

20 *Septic Infection of Joints. A. E. Barker.
21 Rheumatism in Childhood. F. J. Poynton.
22 *Significance of Some Common Symptoms in Childhood. C. V. Kebbell.
23 *Bow-Legs in Small Children. P. B. Roth.
24 Recent Literature on Children's Diseases. H. Thursfield.
25 Intestinal Stasis. A. C. Jordan.
26 Treatment of Gangrenous Hernia by Combined Anastomosis and Fistula Operation. E. Gillespie.
27 Recent Literature on Roentgen Rays and Radium. N. S. Finzi.
28 Literature on Nervous and Mental Diseases. H. C. Thomson.
29 Combined Treatment of Alcohol Inebriety. J. W. A. Cooper.
30 Two Curious Cases of Coin in Alimentary Canal. E. R. Wheeler.
31 Recent Literature on Clinical Pathology. W. D. Emery.

20. **Septic Infection of Joints.**—Among the many non-traumatic ways in which joints may be infected through the blood-stream, Barker says, less attention has been given to the possible entrance of bacteria from the gums than the subject deserves. Every one is familiar with synovitis following gonorrhea or other forms of septic catarrh of the urethra and vagina, and with the arthritis of pyemia, and of the acute fevers, such as scarlatina, measles, typhoid and influenza. Pneumococcal infections of joints are also recognized, but are not usually definitely traceable to an attack of pneumonia. But in many instances it may be difficult to trace the joint trouble to any of these latter and it is well to examine closely into the state of the teeth and gums in every attack of synovial inflammation of non-traumatic origin. And even when acute synovitis follows on blows, strains and other forms of non-penetrating injury, it is equally important to include in the examination, for possible portals of infection, the teeth, mouth and pharynx, for the injury may be only the factor determining where a previous infection shall manifest itself. Barker reports four cases. They illustrate the perfect type of so-called hemogenic infection. The organisms, introduced into the system through a very common septic lesion (pyorrhea alveolaris), are carried into the blood-stream and excite in the lining membrane of a joint-cavity an inflammation producing, in the first place, hypersecretion and, eventually, suppuration.

22. **Common Symptoms in Childhood.**—Kebbell emphasizes the importance of a thorough examination in all cases of illness in childhood, and the assistance to be gained from a careful inspection of the child, which, if not actually suggesting the disease, will often give warning of the severity of the case, or, at any rate, that the child is, in doubtful cases, really ill; thus leading the examiner to take a cautious view of the matter rather than merely dismissing it as some trivial complaint. It is surprising, says Kebbell, how frequently some disease, such as heart or lung affection, is discovered, which the parents have never suspected.

23. **Bow-Legs in Small Children.**—In the mild cases, Roth points out that all that is required is the application of suitable splints, which must be worn during the day while the child is walking about. The ordinary padded wooden hospital splint, 2 inches broad and 6, 8 or 10 inches long, is admirable. It should extend from the bottom of the shoe-heel to the line of the knee-joint and is applied to the inside of the leg and ankle over the sock and shoe, and bandaged on firmly. The bandage should come well down on the outside and obtain a purchase from below the external malleolus. The splint is applied in the morning and removed at night by the mother. The padding at the lower end of the splint will soon wear out; when it does, the mother must recover it. The mother is also given extra sets of bandages, to be applied when the others are dirty, and is impressed with the importance of never letting her child walk without the splints. The patient is seen every fortnight at first, and later every month. The splints are worn for from three to twelve months, being discarded as soon as the legs are quite straight. Roth has no experience of the condition recurring. During the whole period of treatment, an antirachitic diet is ordered, consisting chiefly of milk, eggs, bread and dripping, bacon-fat, gravy and potatoes, green vegetables and fruit; cod-liver oil and malt if the child can take it. The severe cases are treated by either osteotomy of the tibia and fracture of the fibula, or by the so-called "manual osteoclasis" of both bones. After a trial of both methods, Roth has entirely discarded the former in favor of the latter. In "manual osteoclasis" the affected limb is grasped by both hands, and broken by leverage over a suitable fulcrum.

Sei-I-Kwai Medical Journal, Tokyo

January 10, XXXII, No. 1, pp. 1-8

32 Vaccine Treatment of Erysipelas; Report of Sixteen Cases. Y. Takaki.

Bulletin de l'Académie de Médecine, Paris

January 14, LXXVII, No. 2, pp. 19-26

33 Thyroid Treatment Effectual in Five of Seven Cases of Retraction of the Palmar Aponeurosis. M. Gilbert.

January 21, No. 3, pp. 27-41

34 Frequency of Epigastric Hernia in Connection with Gastric Ulcer and Cancer. E. Kirmisson.
35 Dosage of Bromids in Water. (Nouvelle méthode pour le dosage rapide des bromures dans les eaux naturelles.) G. Denigès and L. Chelle.

Journal de Chirurgie, Paris

January, X, No. 1, pp. 1-128

36 Cicatricial Stricture of the Esophagus. (Traitement des rétrécissements cicatriciels de l'oesophage.) L. Sencert.

Journal de Médecine de Bordeaux

January 26, XLIII, No. 4, pp. 51-64

37 *Nerve Blocking for Painful Laryngitis. (Les interventions à distance sur les nerfs sensitifs du larynx dans les laryngites douloureuses.) G. Liébault.

37. **Treatment of Painful Laryngitis.**—Liébault discusses the anatomy of the nerves in the region and the best means of keeping the pain under control. At the Bordeaux clinic he frequently uses an anesthetic solution which has proved its superiority. It is a combination of 0.2 gm. of cocain; 0.05 gm. morphin; 5 gm. antipyrin; 0.5 gm. quinin sulphate; 0.1 gm. sodium chlorid, and 80 per cent. alcohol q. s. to 50 gm. On each side 0.01 gm. is injected. The injections can be repeated at need. When this fails the superior laryngeal nerve may be resected. This relieves the patients even with inoperable cancer or advanced laryngeal tuberculosis. The prospects are better naturally when the patients are still capable of repair by primary intention. In some cases even this will not remove the pain, probably from participation of other nerve

fibers, but Liébault warns that the recurrent nerve had better be left untouched on account of its motor branches and the danger of motor paralysis. He gives several illustrations to show the preferable technic for access to the superior laryngeal nerve.

Journal d'Urologie, Paris

January, III, No. 1, pp. 1-128

38 *Diffuse Suppuration Around the Bladder. (Phlegmon diffus péri-vésical d'origine prostatique.) F. Legueu.
39 *Hydronephrosis Not Diagnosed for Seventeen Years. (Hydronéphrose de 30 liters diagnostiquée tardivement par l'examen physico-chimique du liquide.) Mosny, Javal and Dumont.
40 Fissure of the Bladder. (Fissure vésicale inférieure. Inversion vésicale; etranglement.) G. Houzel.
41 *Enuresis of Digestive Origin. (Incontinence nocturne d'urine d'origine gastro-hépatique.) A. Collin.
42 Fatal Gas Embolism from Injection of Air into the Bladder. Nicolich.
43 Fatal Gas Embolism During Prostatectomy. G. Marion.
44 Hemorrhage in a Movable Kidney. Caspari.
45 Catheterization of the Ureters Under Direct Visual Inspection. (Du cathétérisme urétéral par cystoscope à vision directe.) J. Ferron.

38. Diffuse Suppuration Around the Bladder.—Legueu reports a case which seemed to be merely ordinary gangrenous periurethritis but necropsy revealed a stricture in the urethra, suppuration in the prostate which had destroyed nearly all of it except around the urethra, and a diffuse perivesical phlegmon, the entire bladder being invaded with a zone of serous or seropurulent infiltration in the subperitoneal cellular tissue. It is the first case he has encountered although he has long been on the lookout for something of the kind. After the operation on the periurethritis the local process started to heal but the general condition grew worse, suggesting trouble above. If the condition had been differentiated in time, Legueu would have attacked the prostatic lesion, draining it both through the perineum and above the pubis, although the prospects for a cure, he remarks, are not very bright with these phlegmons which fasten gangrene on everything they touch.

39. Hydronephrosis.—The kidney contained 30 liters of fluid at necropsy. The patient was a woman of 25 and the first signs of trouble had been noted at the age of 8. For years it was ascribed to tuberculous peritonitis and the hydronephrosis assumed to be ascites until finally chemical examination of the puncture fluid excluded ascites as there was only 2.2 gm. of albumin; experience has shown that with ascitic fluid the proportion of albumin is never below 3 gm. per liter. The finding of only 5.3 gm. of chlorids excluded an ovarian cyst; 8 gm. is the usual figure here. There was also 3.87 gm. of urea, and this finally cleared up the diagnosis in connection with catheterization of the ureters. The urine voided was apparently normal in composition and amount but it came exclusively from the sound kidney.

41. Incontinence of Urine of Digestive Origin.—In cases of this kind there is always a period of physiologic conditions before the onset of the enuresis, after the child has grown out of infancy. The enuresis is also intermittent and irregular, alternating with normal periods. Another characteristic is the unusually sound sleep, and there is generally some mild inherited nervous taint. The children are unusually large eaters; the mother prides herself on the child's fine appetite but there are always slight digestive disturbances. Treatment is of the simplest, merely reduction of the amount of food, and not letting the children have any liquor or any foods that ferment readily. Mild laxatives are useful and also, possibly, light massage of the abdomen and hot-water compresses. The cure is soon complete in children in institutions but the petted children of the rich are hard to break of the enuresis habit when it is of this stomach-liver type.

Lyon Médical, Lyons

December 29, XLIV, No. 52, pp. 1117-1184

46 *Thomsen's Disease. (Le syndrome électrique myotonique.) J. Cluzet, J. Froment and Mazet.

January 5, XLV, No. 1, pp. 1-48

47 *Modes of Transmision of Typhoid Fever. H. Rondet.

January 12, No. 2, pp. 49-88

48 *Treatment of Diphtheria with Hot Air. (Des inhalations d'air chaud dans le traitement de la diphtérie.) R. Rendu.

46. Thomsen's Disease.—The case of myotonia congenita here described, in addition to the classical symptoms, presented some unusual features. There was no family history though it is generally a hereditary disease. The muscles were not hypertrophied. The persistent tonic muscular contraction was obtained by stimulating the nerve trunks as well as by direct stimulation of the muscle. Moreover the patient, a girl of 18, had goiter of long standing which suggested intoxication from hyperthyroidism as a possible cause for the myotonic symptoms.

47. Modes of Transmission of Typhoid Fever.—Rondet thinks that the principal part in the transmission of typhoid is played by human bacillus-carriers infected from their own excretions, and that therefore one of the most efficient prophylactic measures is instruction of the public, particularly school children, in the importance of absolute personal cleanliness.

48. Treatment of Diphtheria with Hot Air.—Rendu treated a series of sixty-six diphtheria patients, half of them with antitoxin, the others with hot air passed directly into the mouth through a tube connected with an ordinary electric dryer, such as is used by hairdressers. He got practically the same results in the two series of cases, the same percentage of deaths and paralysis, and no cardiac complications in either. The temperature curves were about the same and the false membrane disappeared in about the same time. The hot air was used alone merely to test its efficacy as compared with diphtheria antitoxin. Ordinarily they should be used in conjunction. The effect of the hot air is bactericidal. (His earlier report on the subject was summarized with editorial comment in THE JOURNAL, Aug. 3, 1912, p. 376.)

Presse Médicale, Paris

January 18, XXI, No. 6, pp. 49-60

49 *Treatment of Fracture of Upper Third of the Ulna. J. Abadie.
50 Relations Between Sero-Anaphylaxis and Special Forms of Tuberculosis. (Rapports entre les accidents séro-anaphylactiques et les formes de la tuberculose—Fibro-tuberculose, rhumatisme noueux.) P. Courmont.

January 22, No. 7, pp. 61-68

51 Subcutaneous Suture of Fracture of the Patella and Olecranon. M. Chaput.
52 Retention of Water, Salt or Nitrogen in Nephritis. (Hydrémie, Azotémie, Chlorurémie dans les néphrites.) A. Martinet.

49. Fracture of Upper Third of the Ulna.—Abadie refers in particular to the cases of fracture with dislocation of the head of the radius, and describes his successful treatment of two patients by reducing and suturing the ulna, holding the stumps in apposition with broad prongs, and cutting into the tissues to permit and control exact reduction of the head of the radius. The whole is done at one time and at the earliest possible moment. He has not been able to find any records of a similar technic in the literature, but his success in the cases reported shows the advantages of this procedure. It often happens that the stumps have jagged edges, which interfere with reduction, but reduction must be done before attempting to reduce the head of the radius. It should be opened up to be sure that all is in good order and no intervening scraps of tissue are left to compromise normal healing. The arm must be immobilized afterward, flexed at an acute angle, and *x*-ray pictures taken from the front and side. If the ulna has healed in a defective position, osteotomy may be necessary. Only when all else fails is it proper to resect the head of the radius.

Revue de Chirurgie, Paris

January, XXXIII, No. 1, pp. 1-136

53 *Formaldehyd Fumes in Sterilization of Surgical Materials. (La stérilisation par les vapeurs de formol dans la pratique chirurgicale.) G. Gross and M. Barthélemy.
54 Phlebitis During Course of Uterine Fibroma. J. Duvergey.
55 Anatomic and Experimental Study of Improved Method for Correction of Exstrophy of the Bladder. (Sur la typhlo-urétérostomie après exclusion du caecum et appendicostomie dans le traitement de l'exstrophie vésicale.) D. Taddei
56 *Primary Melanotic Tumors of the Rectum. A. Chalier and P. Bonnet. To be continued.

53. **Improved Technic for Formaldehyd Sterilization.**—Gross and Barthélemy call attention to the technic which they have been using with eminent satisfaction for some years and which seems to be free from the drawbacks of other methods. Instead of using a solution, they use the white powder which forms when the ordinary commercial solutions of formaldehyd are evaporated and become polymerized. It is known as trioxymethylene or paraformaldehyd. Exposed to the air the powder becomes depolymerized, giving off little by little the fumes of formaldehyd. A tray containing a solution of formaldehyd will give off formaldehyd fumes while it evaporates, that is, during two or three days. A tray containing an equal volume of the powder will keep giving off formaldehyd fumes for six weeks. The fumes will also be dry; this is a great advantage for sterilization of instruments, gloves, etc. Their experience has been extremely favorable with the powder. They spread it on trays alternating with trays containing the articles to be sterilized and close the receptacle air-tight. They have three sets of articles and three receptacles in use. They leave them shut up for forty-eight hours, and thus have one always ready to use. Everything is thoroughly sterilized in twenty-four hours, but the additional day confers added security. When the instruments have to be used every day, the sterilization can be hastened by heating the receptacle. The method is particularly fine for rubber gloves; they can be mended like a bicycle tire and the dry sterilization does not weaken the patch. The gloves being dry, any tear in them is recognized at once by the feeling of moisture on the hand. By wiping off any drops of blood that get on the gloves they keep dry throughout the operation and thus keep impregnated with the formaldehyd. The same method is superior also for sterilization of drains, ligatures, dressings, etc. They have performed six hundred operations with this technic for sterilization of the surgical materials, and two thousand laparotomies or herniotomies with gloves sterilized by this technic demonstrate conclusively, they say, the excellence of this simple method.

56. **Melanoma of the Rectum.**—Chalier and Bonnet discuss in this monograph the origin, evolution, prognosis and treatment of primary pigmented tumors in the rectum, with a detailed description of a case personally observed and summaries of sixty-four cases from the literature in this second instalment of the article. They state that this affection in horses was described toward the close of the eighteenth century, the black tumors being hereditary in these animals.

Semaine Médicale, Paris

January 22, XXXIII, No. 4, pp. 37-48

57 *Disturbances in the Circulation from Sudden Contraction of the Vagus. (Troubles circulatoires aigus par hypertonie brusque du nerf vague.) J. Schwartzmann.

January 29, No. 5, pp. 49-60

58 *Protracted Fevers of Obscure Origin. L. Cheinisse.

57. **Acute Disturbances from Sudden Hypertonicity of the Vagus Nerve.**—Schwartzmann reports four cases in which sudden acute weakness, almost syncopal, was accompanied by pallor, sweating, drop in the blood-pressure and slowing of the heart beat from 78 to 54; 90 to 48; 96 to 50, and 80 to 60, but there was no dissociation between auricle and ventricle. The attack lasted only a few instants and everything indicated that the cause was a sudden hypertonicity of the vagus. The attack in two cases followed injection of salvarsan or neosalvarsan. The other patients were having the cuff applied to measure the blood-pressure, and they complained of sudden intense pain. The bradycardia in these cases may have been a reflex phenomenon. Schwartzmann defines the trouble as a vagotonic disturbance of the circulation in persons entirely free before and since of any tendency to bradycardia. The two first patients were reclining at the time, the others seated.

58. **Long Continued Fevers of Obscure Origin.**—Cheinisse thinks that these fevers can generally be traced to their source by excluding in turn the usual factors. He warns that the higher temperature in the rectum after exertion is by no means always a sign of tuberculosis, especially in children. It is liable to be a purely local rise in temperature in the muscles from the exercise of the legs. Avellis found that the axilla temperature never paralleled the fluctuations in the rectum temperature in these cases. The instability of the temperature in children adds another element to the problem. In adults the long continued fever may be due to unsuspected malaria or liver abscess; it is important therefore to inquire as to a stay in malarial and tropical countries. In a case described at length, the patient had been treated for months on the basis of tuberculosis, but was soon cured under quinin. This error is particularly liable to occur in regions long free from malaria. Another source of error is the negative finding of tests for typhoid. In one such case there was no agglutination until the thirty-seventh day of a mild typhoid. In other cases the tests may be positive in an old bacillus carrier, and the typhoid infection may have nothing to do with the long continued fever years later. When the fever is of gastro-intestinal origin it may be the result of intolerance for some special article of food, usually carbohydrates. The dragging fevers of digestive origin generally have a more erratic curve and the weight fluctuates more than in tuberculosis. In the latter also there is a tendency to permanent tachycardia, which is not a characteristic of the digestive fevers. Chronic inflammation of the tonsils or adenoids or of deep lymph-nodes is another source of long continued fever. It may also follow an acute infection in an adult. In one such post-infectious case, after a relatively mild attack of influenza, the man had subfebrile temperature every evening for many weeks although otherwise well. Syphilis may also be responsible; Osler has reported a case of intermittent fever twenty-nine years after infection with syphilis. It kept up for months but subsided at once under specific treatment. The urine should be examined with the microscope and bacteriologically in obscure cases; one patient's urine was found a pure emulsion of streptococci and another's swarming with colon bacilli, although in neither case had there been any symptoms to call attention to the urinary apparatus.

Archiv für klinische Chirurgie, Berlin

C, No. 2, pp. 293-596. Last indexed February 8, p. 482

59 Echinococcus Disease. (214 Echinokokkenoperationen. Beitrag zur Pathologie und Therapie der Echinokokkenkrankheit.) G. Magnusson (Iceland).

60 Inflammation Back of the Peritoneum. (Klinische Beiträge zu den diffusen entzündlichen Erkrankungen des Retroperitoneums und ihre Stellung zur Peritonitis.) O. Sprengel.

61 Fracture of Navicular Bone in Children. (Das Alb. Köhler'sche Knochenbild des Os naviculare pedis bei Kindern—eine Fractur.) E. O. P. Schultze.

62 *Schlatter's Disease of the Tibia. (Zur Schlatter'schen Krankheit. Symptom einer Systemerkrankung.) E. O. P. Schultze.

63 Pathogenesis of Congenital Atresia of Intestines and Esophagus. H. Forssner and E. W. Kreuter.

64 *Technic for Effectual and Harmless Blocking of the Nerves in the Leg. (Die Anästhesirung der unteren Extremität mittels Injection auf die grossen Nervenstämme.) W. Keppler.

65 Experimental Research on the Importance of the Veins with Arteriovenous Aneurysm. E. Ney.

66 Embryonal Predisposition to Tumor in the Parotid Gland. (Ein embryonaler Seitengang des Ductus parotideus und seine Beziehungen zu einigen Tumoren der Parotis.) E. Weishaupt.

67 Angioma of Peripheral Nervous System. S. Sato.

68 Advantages of Button in Gastro-Enterostomy. (Zur Anwendung des Murphyknopfes bei der Gastroenterostomia retrocolica posterior; 81 Fälle.) F. Fesenmeyer.

62. **Schlatter's Disease.**—The avulsion of the tongue-shaped projection of the tubercle of the tibia, to which Schlatter first called attention, is being encountered with greater frequency as the Roentgen rays are coming into more common use. Schultze reports from the university clinic at Berlin, in charge of Bier, eight typical cases all in boys between 13 and 14, and in six of the cases the affection was bilateral. The little patients were all growing rapidly and none seemed to be very robust; three had enlargement of lymph-nodes at various points and nearly all had had rachitis or scrofula in early childhood. There was no difference in size between the tibia on each side and no signs of atrophy or of inherited syphilis; the Wassermann was constantly negative in all. There was no history of trauma in any case and only suspicion of it in two, except that two first noticed while they were running

that there was something wrong in the leg. It did not prevent their continuing playing; one boy noticed that his leg was swollen a little at the point of the lesion, but there was no sign of a bruise then or later. Schultze thinks that all the evidence is in favor of the assumption that the bone is diseased, and that the trouble is a spontaneous fracture occurring in a predisposed bone. In only three cases could by any possibility the force have been strong enough to tear off a sound tubercle. The mechanism seems to be about the same as for the development of coxa vara. Another argument in favor of this view is the protracted healing. An ordinary fracture in sound bone heals in three weeks in a healthy boy, but in this Schlatter affection four months may be required before healing is complete, or even longer. The trouble therefore is essentially constitutional rather than local. Treatment therefore should aim to build up the general health. Phosphorus and arsenic internally seemed to hasten healing in his cases, and painting the region with tincture of iodin seemed to stimulate repair. Immobilizing appliances are not necessary; the same results can be realized with an ordinary bandage.

64. **Blocking the Nerves in the Leg.**—Keppler reports from the same clinic the excellent results obtained with injection of an anesthetic to block each of the principal nerves in the thigh or the two in the leg below the knee. His illustrations show the exact technic. The method has proved its usefulness for major operations, and it has been found absolutely reliable when the technic was minutely carried out. The amount of the anesthetic required is comparatively small. It abolishes the pain during the application of the constricting bandage to expel the blood, while the anesthesia induced is of long duration, persisting for hours after the operation is completed. Another advantage, especially for orthopedic operations, is the transient motor paralysis which it induces. Twenty cases are reported in detail to show the different types of operations performed with this technic and the excellent outcome. In no instance was the operator surprised by the slightest by-effect or after-effect.

Berliner klinische Wochenschrift

January 20, L, No. 3, pp. 97-144

69 *Fifty Years of Electrotherapy. (Fortschritte in der Elektrotherapie.) H. L. Jones.
70 Technic for Resection of Goiter. (Beidseitige Resektion oder einseitige Exstirpation des Kropfes?) A. Tietze.
71 *Restoration of Nose by Pedunculated Flap of Skin from Over the Sternum. (Ein dritter Weg zur totalen Rhinoplastik.) E. Holländer.
72 Plastic Operations on the Breast. (Ueber Mammaplastik.) M. Weichert.
73 *Operative Treatment of Cavity in Lung. (Zur Cavernenchirurgie.) G. Baer.
74 *The Blood-Findings in Tuberculosis. (Blutbefunde bei Tuberkulose.) L. Rabinowitsch.
75 Nystagmus in Febrile Diseases. E. v. Czyhlarz.
76 Presence of Cholesterin, Cholesterin Esters and Lecithin in the Blood-Serum. (Zur Lipoidchemie des Blutes.) M. Bürger and Beumer.
77 *Prophylaxis with Attenuated Tubercle Bacilli. (Schutzimpfung mit abgeschwächten Tuberkelbacillen.) M. Rabinowitsch.

69. **Electrotherapy.**—Jones states that the recent fuller appreciation of the chemical action of the electric current, the *ion* theory, and the appreciation of the heating properties of the current have opened the door to great advances in electrotherapy in the immediate future. The knowledge that the ammonium *ions* are less irritating than sodium *ions* has rendered it possible to apply stronger currents and for a longer time. Bergonié even goes so far as to apply a 25 milliampere current along the paralyzed limb after poliomyelitis for an hour twice a day; the child feels so little disturbance from it that it plays and sleeps during the sitting, and never shows signs of fatigue, while the ultimate outcome is extremely good. Jones uses an electrode covered with two or three layers of thick felt and can send through this without irritating the skin a current of 50 milliamperes for twelve or twenty minutes a sitting. The high frequency current has such short waves that the action of *ions* is practically eliminated; consequently very powerful currents can be used. In diagnosis it is now possible to distinguish a great number of transitional stages between the normal reaction of the muscle and the reaction of degeneration.

71. **Plastic Operation on the Nose.**—Holländer takes the pedunculated flap from the chest over the sternum but otherwise follows the technic of the Italian method, immobilizing the head bent forward but without the immobilization of the arm. The skin of the chest is better fitted for restoration of the nose than that of the arm, he says, and there is less danger of necrosis as the flap is not twisted. He gives four illustrations to show the application of the method and the results in one clinical case.

73. **Operative Treatment of Cavity in the Lung.**—Baer describes a method which he says may lead to the healing of even large cavities without any danger for the patient, without a mutilating operation, and in a comparatively brief time. He aims to separate the pleura and lung from the wall of the chest mobilizing and causing the collapse of the cavity. The space left can be filled with nitrogen or paraffin. Tuffier utilized scraps of lipoma for the purpose, and Bacmeister has injected paraffin into the pleura, instead of nitrogen, in experiments with artificial pneumothorax on dogs. Baer reports the successful application of the method to a man of 23 with a large cavity in one lung rebellious to the usual measures and to the Wilms' operation (operative reduction of the size of the chest wall on that side). As a last resort the second rib was resected for 6 cm., under local anesthesia; the costal pleura was readily detached and the recess thus formed was tamponed with gauze. The cavity itself was not opened. A week later the tampon was removed, adhesions had formed and a point on the anterior wall of the cavity tore. Consequently the cavity was then opened up and evacuated and it gradually healed. The thorax wall sank in, aided by the preceding Wilms' operation. The patient recuperated amazingly and tubercle bacilli could no longer be found in the sputum. It is now proposed to pack the cavity and the outer hole at longer and longer intervals, supplemented by heliotherapy and radiotherapy of the cavity. When it is quite healed Baer proposes to fill the cavity with the plastic material. The detaching of the cavity brought about a profound change in it as was evidenced by the disappearance of the bacilli from the sputum. The collapsing inward of the walls of the cavity modifies conditions and starts the process to healing even if it is not evacuated. Even partial mobilization of the anterior wall of the cavity may answer the purpose, possibly supplemented later by evacuation of the cavity or extrapleural compression by introducing scraps of paraffin, solid at room temperature but which soften up at body temperature and become fluid at 42 C. There can be no danger of embolism with these solid scraps of paraffin; by the time the paraffin has softened, the blood vessels in the region are no longer open. By this means the entire procedure can be completed at one sitting and the wound definitely sutured. If the space is not all filled up, nitrogen or more paraffin might be injected later.

74. **Tubercle Bacilli in the Blood.**—Rabinowitsch reports research which apparently confirms the assumptions of Virchow and Orth, published twenty-two years ago, to the effect that an injection of tuberculin is liable to rout out the tubercle bacilli from their nests and drive them into the blood. In the numerous accounts that have been published in the last few months of the finding of the bacilli in the blood, it is not stated whether the patients had been taking tuberculin or not. Bacmeister has also recently stated that inoculation of animals with the blood from fifteen tuberculous patients gave constantly negative results, but after four of the patients had been given a diagnostic injection of tuberculin, with a distinct local reaction, then the inoculation of animals all gave positive results. He added that there can be no doubt that virulent bacilli had been driven out of the diseased organ into the circulating blood by the injection of tuberculin, and remarks that this is a pretty serious thing.

77. **Prophylactic Inoculation Against Tuberculosis with Attenuated Tubercle Bacilli.**—Rabinowitsch announced in 1904 that he had succeeded in cultivating strains of tubercle bacilli which were avirulent, and that animals inoculated with these avirulent strains proved resistant to virulent bacilli with which they were inoculated two months later. He lacked the

means to carry on his research and consequently dropped it after this announcement. He here describes the means with which he was able to enhance or reduce the virulence of the bacilli at will, and affirms anew that the virulence of tubercle bacilli is by no means a constant property but can be varied at will. He used for this formaldehyd, adding a minute quantity to the culture or letting the fumes act on the culture. After thus being exposed to formaldehyd, the cultures were transferred to fresh serum media. One strain derived from the blood of a consumptive and highly virulent for both rabbits and guinea-pigs became completely avirulent under this treatment. Two guinea-pigs inoculated subcutaneously with 0.002 gm. of the culture showed no signs of infection when killed six weeks later, while others inoculated in the same way and then, after two months, inoculated with the same amount of a highly virulent culture, human and bovine, showed no signs of infection when killed six weeks later. The controls developed tuberculosis in a very severe form.

Deutsches Archiv für klinische Medizin, Leipsic

CIX, Nos. 3-4, pp. 209-416. Last indexed February 15

78 Elimination of Nitrogenous Waste in Nephritis, and Intravenous Administration of Diuretics. (Ausscheidung der stickstoffhaltigen Stoffwechselprodukte bei Nephritis und intravenöse Anwendung der Diuretica.) P. Erdelyi.
79 Estimation of Acidosis in Diabetes. (Acidosebestimmungen bei Diabetes mellitus. Klinische Untersuchungen über die Kohlensäurespannung der Alveolarluft.) H. Straub
80 *Alcohol Content of the Blood. (Der Alkoholgehalt des Blutes unter verschiedenen Bedingungen.) W. Schweisheimer.
81 Metastatic Abscess in Brain After Suppuration of Bronchial Lymph-Node. (Zur Lehre der Hirnabscesse.) O. Hirschberg.
82 Elimination of Purin Bases in Health and Disease. (Ueber Purinbasenausscheidung bei Gesunden und Kranken.) J. Hefter.
83 Tryptophan-Splitting Ferment in Pathologic Effusions. (Vorkommen von peptolytischen Fermenten in Exsudaten und dessen diagnostische Bedeutung.) R. Lenk and L. Pollak.
84 Technic for Blood-Count. (Ueber Anwendung getrennter Pipetten und Mischgefässe bei der klinischen Blutzählung.) V. Ellermann.
85 The Circulation in the Lungs as Influenced by Differential Pressure. (Zur Blutzirkulation in der Lunge bei geschlossenem und offenem Thorax und deren Beeinflussung durch Ueber- und Unterdruck.) F. v. Rohden.
86 Anemia from Hemorrhage. (Ueber Blutungsanämie.) L. S. Milne (New York)

80. The Alcohol Content of the Blood.—Schweisheimer carried out a series of experiments on total abstainers, moderate drinkers and drunkards. He found an extremely small percentage of alcohol in normal blood, .029 to .036 per cent. Alcohol passes directly into the blood as such, and in the blood of a drunken man may reach as high as 2.26 per cent. On taking a given amount, a higher percentage is found in the blood of a non-drinker than of a drinker. In the non-drinker the highest alcohol content is reached after one and a half to two hours; it remains at this level for a considerable time (five hours, as contrasted with two hours in drinkers) and falls slowly. In drinkers it rises and falls quickly, the entire time required for elimination being about half as long as in non-drinkers. The psychic signs of drunkenness run parallel with the concentration of the alcohol in the blood. The hypersensitiveness of epileptics to alcohol is probably due to the fact that they are unable to oxidize the alcohol and thus an abnormally high percentage of it passes into the blood. This determination of the alcohol content of the blood may be used clinically to differentiate between unconsciousness from alcohol and other causes, such as uremia, opium, trauma, etc. Tables and curves are given showing in detail the results of the experiments.

Deutsche medizinische Wochenschrift, Berlin

January 23, XXXIX, No. 4, pp. 145-200

87 Treatment of Mycoses. (Behandlung der Dermatomykosen.) V. Klingmüller.
88 Unfavorable Outcome of Tests of Tebesapin. (Experimentelle Untersuchungen mit dem Zeunerschen Tuberkulosepräparat "Tebesapin.") B. Möllers and G. Wolff.
89 Therapeutic Worthlessness of Mesbé in Tuberculosis. (Erfahrungen mit Mesbé bei Lungen- und Kehlkopftuberkulose.) O. Roepke.
90 Congenital Familial Jaundice. E. Maliwa.
91 *Brachial-Plexus Neuritis and Polyneuritis Following Pneumonia. (Metapneumonische Brachialplexusneuritis und -polyneuritis.) Biermann.
92 Causes of Putrid Sputum. T. Sasaki and I. Otsuka.
93 *Extra Danger from Operative Hemorrhage with Narrow Aorta System. E. Melchior.
94 Improved Technic for Estimating the Pupil Reactions in Differential Diagnosis. (Ueber den Schwellenwert der Pupillenreaktion und die Ausdehnung des pupillomotorische Bezirkes der Retina. Untersuchungen auf Grund einer neuen Methodik.) E. Schlesinger.
95 Signs of Intoxication After Injections of Mercurial Proprietary. (Toxische Erscheinungen nach wiederholten subkutanen Embarininjektionen.) R. Fried.
96 Surgery of the Heart. (Zur Herzchirurgie.) H. Lucas.

91. Neuritis Following Pneumonia.—Biermann states that brachial neuritis following pneumonia has been reported only comparatively recently, while large numbers of cases have been published consecutive to typhoid, small-pox, scarlet fever, measles, acute polyarthritis, tuberculosis, erysipelas, mumps, epidemic meningitis, malaria and influenza. He has found only six on record in which the neuritis followed pneumonia, but adds three typical cases of this metapneumonic brachial plexus neuritis, all encountered in the last three years. In the first a previously healthy young woman, ten days after typical pneumonia, had pains in both arms and she was unable to use them; for three weeks she had to be fed. Five months after the onset of the neuritis there was still paresis and atrophy from the trouble in the brachial plexus but by the end of two years all traces of the disturbance had disappeared, confirming its neuritic character. The second patient was a farmer of 22 with a third attack of pneumonia in ten years. About two weeks after the last attack he had sudden violent pains in both arms with extensive paralysis of the arms the next day, involving also part of the shoulder muscles. The paralysis did not grow any worse but the muscle groups became more or less atrophied; they gradually recuperated under electric and bath treatment. In all three cases there was a slight difference in the size of the pupils, with normal light and accommodation reactions, suggesting possibly involvement of the cervical roots in the neuritic process. In both cases the brachial plexus was affected alone. In one case there were vasomotor and trophic disturbances, patches of redness and desquamation of the palms, such as have been observed by others with polyneuritis. In the third case the paralysis developed very gradually after recovery from the pneumonia, and it was restricted to the legs, sensory disturbances predominating.

93. Danger from Operative Loss of Blood with Hypoplasia of the Aorta System.—Melchior reports two cases of death under signs of the patients' having bled to death although less than three-fourths of a liter of blood had been lost. Necropsy revealed an abnormally narrow aorta system. Virchow called attention years ago to the frequent coincidence of endocarditis and hypoplasia of the aorta. The trouble is a misproportion between the capacity of the arterial system and the size of the rest of the body, entailing low resisting power. The symptoms were increasing pallor, motor restlessness with relatively good pulse, but no signs of postoperative shock. It is probable, Melchior thinks, that cases of "thymus death" may come under this heading. It is certainly a striking coincidence that in so many instances of the latter on record there had been just preceding hemorrhage. A misproportion between the amount of blood lost and the severity of the effect should suggest this constitutional oligemia from an unduly narrow aorta system. The hemorrhage in his cases was purely parenchymatous. Discovery of a morbidly narrow aortic system should warn against any operation except as a last resort. There do not seem to be any means to determine the presence of the anomaly, but it should be suspected when a physically well-developed young person has rebellious anemia and gets easily exhausted after slight effort. It might be possible to detect it by palpation of peripheral arteries.

Deutsche Zeitschrift für Chirurgie, Leipsic

December, CXX, Nos. 1-2, pp. 1-186

97 Fracture of the Odontoid Process of the Axis. (Frakturen des Zahnfortsatzes des Epistropheus.) E. Fritzsche.
98 Pedunculated Skin Flaps from the Chest to Cover Defects in the Fingers. (Uebertragung gestielter Hautlappen aus der Haut des vorderen Brustkorbs auf Fingerdefekte.) R. Sievers.

99 Hemorrhages in Stasis Cyanosis. (Stauungsblutungen infolge traumatischer Rumpfkompression.) E. Lange.
100 Outcome of Double Fracture of the Ankle. (Endresultat bei doppelten Knöchelbrüchen.) G. Molineus.

January, Nos. 3-4, pp. 187-394

101 Orchitis Ascribed to Strain. (Die angebliche Orchitis par effort vor der Pathologie, der Klinik und dem Unfallgesetz.) A. de Cortes.
102 Tissues Living Outside the Organism. (Ueber Gewebskulturen in vitro unter bes. Berücksichtigung der Gewebe erwachsener Tiere.) A. Diiger.
103 *Intravenous Anesthesia. W. Keppler and F. Breslauer.
104 Ischemic Paralysis and Contracture. (Beiträge zur Anatomie und Pathologie der quergestreiften Muskelfaser. Experimentelle Studien zur Lehre von der ischämischen Muskellähmung und Muskelkontraktur.) F. Kroh.
105 *Tubercle Bacilli in the Circulating Blood in Surgical Tuberculosis. M. Krabbel.
106 Twelfth Case on Record of Pure Dislocation of the Articulation of Astragalus with the Scaphoid Bone. (Luxation im Talonaviculare Gelenke.) W. Nobe.

103. **Intravenous Anesthesia.**—This communication from the university clinic in charge of Bier reviews the history of attempts to induce general anesthesia by the intravenous route, and then reports extensive experimental experiences. The results with the ordinary anesthetics were highly discouraging; better results were obtained with alkaloids of the opium group.

105. **Tubercle Bacilli in the Blood with Surgical Tuberculosis.**—Krabbel examined eighteen patients with certain surgical tuberculosis and found tubercle bacilli in 66.6 per cent.; also in 20 per cent. of five with tuberculous lymph-nodes and in 25 per cent. of four with mucosa, skin or tendon-sheath tuberculous processes. The finding of the tubercle bacilli is of great differential importance in dubious cases of surgical tuberculosis, when there are no clinically apparent tuberculous lesions in the lungs which might explain the presence of the tubercle bacilli in the blood.

Jahrbuch für Kinderheilkunde, Berlin

January, LXXVII, No. 1, pp. 1-124

107 *Chronic Nephrosis in Children. O. Heubner.
108 Dependence of Calcium Balance on Intake of Alkali. (Abhängigkeit der Kalkbilanz von der Alkalizufuhr.) M. Dubois and K. Stolte.
109 The Metabolism of Minerals in Rachitis. C. Meyer.
110 The Blood-Picture in Articular Rheumatism, Chorea, Endocarditis and Pseudochorea. (Zur Kenntnis des Verhaltens des Blutes bei den Rheumatosen.) J. Takeno.
111 Antitoxin in Nervous Phenomena of Diphtheria. (Zur Frage der Wirksamkeit des Diphtherieserums bei Beteiligung des Nervensystems an der Erkrankung.) W. Beyer and H. Kleinschmidt.

107. **Chronic Nephrosis in Children.**—Heubner uses the term nephrosis because he finds that the kidney affections of childhood cannot be classified according to the terminology usually used in describing kidney disease in adults. In a series of 17,000 cases extending over a period of seventeen years he found only seventy-three children with chronic kidney disease. These he divides into six classes: 1. Chronic hemorrhagic nephrosis. Thirty, or almost half of all the cases, were characterized by bloody urine, persisting continuously for years. There was albuminuria of from 3 to 9 per cent. or even higher, with leukocytes and casts of all kinds. Dropsy of greater or less degree was always present. The histological picture was a combination of parenchymatous and interstitial characteristics. A large percentage of these children have the lymphatic constitution, and in cases with otitis, tonsillitis or swollen glands he recommends removal of the tonsils and careful attention to the nose, throat and ear. Specific infections do not seem to be particularly important in this group. The prognosis is difficult. The duration is often for years but the tendency is to grow worse.

2. The second group is very similar to the first except that there is no hemorrhage. Clinically the type is more severe and the course shorter. Dropsy is generally the first symptom that calls attention to the kidneys. Except that there is no blood, the urine shows the same characteristics as in the preceding group. Death generally occurs after several months. The pathologic picture is that of the large white kidney. 3. A true contracted kidney was observed in only one case, that of a patient with hereditary syphilis. 4. There were only six cases in this group, characterized by pyelitis. The process was evidently a septic infection extending upward. Bacteriologically they were all colon bacillus except one case which was streptococcus. The symptoms were fever, pain and swelling in the kidney region, large quantities of albumin and pus and all kinds of casts. 5. This group includes the mild nephroses following acute infectious diseases, chiefly scarlet fever. There were thirteen cases. No dropsy was observed. Frequently there are no symptoms pointing directly to the kidney but when the urine is examined it is found to contain a slight amount of albumin and sometimes hyalin and granular casts. It may last for years without affecting the general health seriously, but if the child is attacked again by an infectious disease it may pass over into one of the more serious forms. 6. This group is practically the same as the preceding, clinically and etiologically, except that it is milder. The albuminuria is intermittent and frequently recovery is complete. The treatment recommended is practically the same as that commonly given for nephritis in adults.

Medizinische Klinik, Berlin

January 19, IX, No. 3, pp. 83-122

112 Epileptoid States in Alcohol Intoxication. E. Meyer.
113 Hernias in General. H. Schloffer.
114 *Ulcerative Colitis. (Colitis ulcerosa und ihre Behandlung.) K. Wegele.
115 The Heart and Competitive Athletics. (Herz, rechte Herzkammer und Sportleistung.) J. A. Gruber.
116 *The Question of Diuresis. M. Klotz.
117 Recurring Diphtheria of the Vulva. (Rezidivierende menstruelle Vulvadiphtherie.) M. Penkert.
118 Tentative Research on Treatment of Peritonitis. E. Schepelmann.

114. **Ulcerative Colitis.**—Wegele remarks that the results of operative treatment of ulcerative colitis have not been very encouraging to date. Mummery reported twenty-one patients cured in twenty-seven operative cases and seven patients cured under medical measures alone. Zweig had four die in seven operative cases and two patients were left with a permanent fistula. Wegele cites additional experiences to sustain his assertions that systematic local and internal treatment is liable to cure although not guaranteeing against recurrence. Even surgery has not accomplished this to date. The course of ulcerative colitis is extremely chronic and protracted, with a special tendency to recurrence. In the acute stage Rosenheim advises (with Plehn) twelve doses daily, for three days, each 0.03 gm. calomel (0.02 for children), following this with bismuth salicylate. In the chronic stage the intestine must be systematically rinsed out and then a medicated enema injected. It requires great perseverance on the part of the patient but the trouble is well repaid. Application of a powder under rectoscopy should be restricted to the ampulla. He does not regard rectoscopy as so harmless as many do; the medical press last year published five cases of perforation from this cause.

116. **Diuresis.**—Klotz refers to Brodzki's experimental research which demonstrated that milk-sugar has a marked influence in promoting diuresis. The mild diuretic action of lactose was already known to pediatrists. If a child is put on full milk, the majority of the fluid thus ingested will find its way out again in the urine while the stools will become hard. Klotz has found a vegetable diet useful in treatment of enuresis as so much of the fluid ingested is diverted to the intestines away from the kidneys. Certain fruits have a diuretic action, but vegetables reduce the output of urine, according to his clinical experience. Diabetics on a vegetable diet find their thirst relieved and the polyuria diminished. He reiterates that in nephritis a vegetable diet will aid materially when it is advisable to reduce the water intake; by its alkaline elements it aids further in reducing the acidity of the urine.

Monatsschrift für Geburtshülfe und Gynäkologie, Berlin

January, XXXVII, No. 1, pp. 1-168

119 *Eclampsia. (Behandlung der Eklampsie. Eine übersichtliche Besprechung.) P. Zweifel.
120 Retention of Ovum. (Ueber Breus'sche Molen und retinierte Eier im allgemeinen.) E. Waldstein.
121 *Primary Tuberculous Elephantiasis. (Die elephantiatische Tuberkulose der Vulva.) C. Daniel.

122 Severe Traumatic Injury of the Uterus. (Ursachen, Therapie und die forensische Bedeutung der violenten Gebärmutterverletzungen.) R. Bretschneider.
123 Wassermann Reaction During Pregnancy and the Puerperium. F. Sarateanu and C. Velican.
124 *Interrelations Between Internal Secretions of Mamma and Ovary. F. Cohn.
125 Defects in Scalp of the Newly Born. (Zur Kenntnis der Weichteildefekte am Kopfe Neugeborener.) E. Vogt.
126 *Extradural Anesthesia for Surgical and Gynecologic Operations. T. Bleek.

119. **Treatment of Eclampsia.**—Zweifel reviews the history of the treatment of eclampsia and discusses the different methods in vogue at different periods. He does not believe in operative interference in the majority of cases, and has had far better results with expectant treatment, venesection and the administration of hypnotics according to Stroganoff's method, which was outlined in THE JOURNAL, Dec. 21, 1912, p. 2295.

121. **Tuberculous Elephantiasis of the Vulva.**—Daniel reports in detail with histological findings a case of tuberculous elephantiasis and cites seven cases from the literature. The diagnosis from syphilitic or filarial elephantiasis is made by the ophthalmic and Wassermann reactions, microscopic examination of a piece of tissue cut from the growth, and the presence of other symptoms of tuberculosis, fever, loss of weight, enlargement of inguinal glands, tuberculous foci in the lungs, etc. The treatment is complete excision of the growth, but in the majority of the cases there has been recurrence and finally death from tuberculosis of the lungs or intestines.

124. **Effect of Ovarian Secretion on Mammary Gland.**—Cohn concludes from animal experimentation and a number of human cases described that the internal secretion of the ovary exercises a stimulating effect on the growth of the mammary gland but that, on the contrary, it has an inhibitory influence on milk secretion.

126. **Extradural Anesthesia in Surgical and Gynecological Operations.**—Bleek recommends extradural anesthesia with novocain as the method of choice in operations in the region of the sacral nerve and all rectal and vaginal operations, and, with the addition of slight general anesthesia, in Alexander's operation and operations for hernia and on the bladder. He gives as a rule 20 c.c. of a 2 per cent. solution, injected slowly so that the injection requires two or three minutes, due care being exercised to avoid getting inside of the dura. He describes his own results in a series of fifty cases. In sixteen it was necessary to give a general anesthetic during a part of the operation.

Münchener medizinische Wochenschrift

January 21, LX, No. 3, pp. 113-168

127 *Asthma. (Zur Kenntnis und zur Therapie des Asthma.) C. Stäubli.
128 *Blood in the Spinal Fluid. W. Geissler.
129 Botulismus Poisoning; Six Cases. (Gruppe von 6 klassischen Botulismuserkrankungen in der Eifel und der Nachweis ihres Erregers, des Bacillus botulinus.) E. Schumacher.
130 *The Hypophysis and Diabetes Insipidus. M. Simmonds.
131 *Efficiency of Oleum Chenopodii in Ankylostomiasis. (Das Oleum chenopodii gegen Ankylostomiasis und eine neue Methode der Wertbestimmung von Wurmmitteln.) W. Schüffner and H. Vervoort.
132 Graduated Percussion Hammer. (Das Perkussionsquantimeter.) G. Baer.
133 The Cutaneous Tuberculin Reaction in Prophylaxis of Tuberculosis. (Kutanreaktion im Dienste der Schwindsuchtsprophylaxe.) Buttner-Wobst.
134 Psychiatry and Gynecology. Bossi.
135 Cerebral Abscess Originating in Ear. (Zur Pathologie und Klinik der otogenen Grosshirnabszesse.) L. Haymann.
136 *Marion Sims. A. Allemann.
137 *Medical Impressions of America. (Allgemeine Eindrücke von Amerika.) Galli.

127. **Asthma.**—Stäubli defines asthma as the result of a spasm of the bronchi plus a vasomotor secretory narrowing and obstructing of the lumen of the finer bronchi. One or the other factor may predominate, and there is generally an inherited predisposition. The musculature of the bronchi and the nerve centers innervating the mucosa and having control of respiration respond with undue readiness to various reflex irritations from the respiratory or gastro-intestinal tract, the genital apparatus or the skin, or to climatic factors, dread and other emotions—the result being a spastic and secretory contraction and obstruction of the finer bronchi, thus interfering with the escape of the air from the alveoli. The air left in the lung (the residual air) and the reserve air, that is, the amount of air which can be expelled by a maximal expiration, are present in such amounts that the actual amount of air that can be utilized is reduced, while the complementary air, that is, the amount which can be drawn in at a breath above the ordinary amount inspired, is reduced to the minimum. Stäubli shows by diagrams the serious condition which may thus result when the lungs are crowded with residual and reserve air, leaving no room for the tidal air. Treatment should aim to reduce this hyperexcitability of the nerve centers involved and of the nerve terminals in the air passages. For general hygiene in these cases he commends a trip to the mountains and horseback riding. Congenial occupation for the mind is a powerful aid, but there is nothing that proves so effectual as a mountain climate. A few months among the mountains frequently banishes permanently the disposition to asthma. Epinephrin is proving the most powerful local measure, with or without a little atropin and cocain. Unless the spray is of the finest, the fluid condenses in the throat and does not reach the alveoli, so Stäubli has invented a little atomizer which works with a very small amount of fluid and can be carried conveniently in the pocket. The tube from the bulb branches, one branch causing the spray which is driven into a funnel inside the atomizer. As the spray emerges from the funnel it is atomized anew by the second air jet from the bulb. The spray by this double manipulation is so fine that it can be driven through a tube a foot long with a lumen of only 6 mm., the tube wound once and a half on itself. A small amount of the ordinary 1 per thousand solution of epinephrin in this pocket atomizer gives the patient confidence that he will be able to abort an impending attack at any time, so he feels free to attend theaters, etc., which in turn has a favorable influence on his general nervous condition. Stäubli has never witnessed any by-effects from this epinephrin spray, and the effect seems to be more lasting than with subcutaneous injections of larger amounts. The attacks grow lighter and the intervals longer. It proved particularly useful for patients who had been recuperating in the mountains. With the epinephrin spray they warded off further attacks after their return.

128. **Blood in the Spinal Fluid.**—Geissler gives two tables to show the special differential points that can be learned from the examination of the spinal fluid.

130. **The Hypophysis and Diabetes Insipidus.**—In Simmonds' case a woman of 37 developed obstinate and intense polyuria two months after removal of a cancer in the breast. The amount of urine varied from 10 to 19 liters a day. Necropsy three months after the operation on the breast showed that the entire posterior portion of the hypophysis had been entirely destroyed by a metastatic cancerous process. Consequently, the polyuria could not have been induced by the secretion from this portion of the hypophysis. Schäfer's research has established that the anterior portion of the hypophysis can have nothing to do with the secretion of the urine. The intermediate portion, although intact, yet must have been irritated to hyperfunctioning by the adjacent destructive process in the posterior portion. The conclusion follows that this pars intermedia is responsible for diabetes insipidus.

131. **Oil of Chenopodium in Hookworm Disease.**—Schüffner and Vervoort state that in their practice at Deli in the last fifteen years they have found uncinariasis extraordinarily prevalent. In the last eight months they have been giving oil of chenopodium a thorough trial in 1,457 cases, comparing the efficacy with that of thymol, naphthol and other vermifuges. Compared with eucalyptus oil with a coefficient of 38, naphthol with 68 and thymol with 83, oil of chenopodium surpassed them all with 91. Another great advantage is that it expels ascarides with the hookworms, thus impressing the minds of the patients much more than when the insignificant hookworms alone are expelled. It is also comparatively pleasant to take.

136. **Marion Sims.**—The *Wochenschrift* pays graceful tribute to American science with a fine portrait of Sims and biograph-

ical sketch, stating that "America takes a place of honor in the history of operative gynecology. The names of McDowell, Nott, Battey, Emmet, Bozemann, Edebohls and Kelly will be known for all time, but none shines with such luster as the name of Marion Sims."

137. **Medical Impressions of America.**—Professor Galli was a member of the medical study trip to this country last fall, and his impressions seem to have been very favorable in regard to medical conditions in America and the American character in general. The American, he says, is unwilling to give up the time for internal treatment and consequently has his organs removed to save time. Passing through the operative wards, the expression of the patients is not sad nor despairing but only impatient that they cannot get up right away. Galli adds that the operations are done more leisurely and with greater precision, possibly, and take more time than is the rule in Europe. He says of the propaganda for reform in the advertising of proprietaries that it has been carried on in true American style on an immense scale and with corresponding success by the American Medical Association, "a powerful organization of physicians which has its headquarters in Chicago, where it owns an imposing seven-story building, in which, besides the extensive chemical laboratory, the official organ of the association is published. This journal has a leading place in American medical literature; it is well managed and appears in the huge weekly edition of 55,000 copies." (*Sie ist vorzüglich geleitet und erscheint in der gewaltigen Auflage von 55,000 Exemplare.*)

St. Petersburger medizinische Zeitschrift

January 14, XXXVIII, No. 1, pp. 1-14

138 Rôle of Albumin in Anaphylaxis. O. Hartoch.
139 Organotherapy to Date. (Bedeutung der innersekretorischen Organe als Heilmittel.) L. v. Lingen.

Wiener klinische Wochenschrift, Vienna

January 23, XXVI, No. 4, pp. 125-160

140 Digestion and Absorption in Light of Serology. (Einige Fragen aus der Physiologie und Pathologie der Verdauung und der Resorption im Lichte moderner serologischer Lehren.) W. Buettner.
141 Final Report on Salvarsan. (Schlussbericht über unsere Erfahrungen mit Salvarsan.) O. Kren.
142 *Recovery of Hearing After Nearly a Year's Deafness of the Barany Type. R. Barany.
143 *Hereditary Familial Atrophy of Optic Nerve. (Sehnervenatrophie.) E. Guzmann.
144 The Phenolphthalein Spectrum. B. Bardach.
145 *Benzol in Treatment of Leukemia. A. v. Koranyi and F. Tedesko.

142. **Complete Restoration of Hearing after a Year of Deafness.**—Barany has encountered to date thirty-five cases of the syndrome he described two years ago in which deafness, headache, vertigo and tinnitus suggested accumulation and retention of fluid in the cerebello-pontine angle. This circumscribed abnormally high pressure may be due to intense local secretion or to obstruction of the outlet. In either case as soon as the fluid finds its way out, the disturbances cease and the hearing may become normal once more. Lumbar puncture may open a passage or anything increasing the pressure to such an extent as to force a passage. He gave atropin for the latter purpose in several cases and the results were good in one instance. A brief excess in liquor drinking answered the purpose in one case, the patient stating that he felt as if something had torn loose in his head and this was followed by the subsidence of the headache, tinnitus and vertigo which had tormented him for weeks. There has been no recurrence during the year or more since. Two of his cases suggest that the syndrome may occur in a rudimentary form comparatively often but escapes recognition. In the first a man of 40 applied for relief from annoying noises in the left ear, stating that his hearing was perfect. The Weber and Rinne tests, however, showed disturbance in the internal ear. There was a remote history of syphilis. He also said he had a curious feeling as if a fluid moved around in his head when he shook it. About 5 c.c. of fluid were released by lumbar puncture and the noises in the ears disappeared at once and tests of hearing showed normal conditions thereafter. The other rudimentary case was in a woman of 35 who complained only of severe tinnitus in one ear. Barany scarcely ventured to diagnose his syndrome but the woman returned two weeks later with all the symptoms of the syndrome in a pronounced form, vertigo, vestibular nystagmus, defective hearing of the internal-ear type, pains in the back of the head and tenderness behind the mastoid process. This patient is still under treatment. Such rudimentary cases teach that Babinski's success in treating tinnitus, vertigo and deafness with lumbar puncture may have been due to the cases of this category included in his material. In the case reported in detail, Barany was obliged to supplement the lumbar puncture with incision of the dura; this improved conditions for months but the affection returned later on the other side and compelled the same extensive operative treatment. The lumbar puncture merely aggravated the symptoms. At date of writing all symptoms had subsided and hearing was normal once more after over a year of deafness.

143. **Familial Atrophy of the Optic Nerve.**—Guzmann states that only about 12 per cent. of the total 300 cases of this kind on record were in women, but in the six cases in one family which he reports one was in a woman and the atrophy of the optic nerve did not develop until she was over 50. In 180 cases on record in which details are given he could find no mention of the unilateral development of the trouble as in one of his cases. This patient threw off the trouble later. Recovery is exceptional.

145. **Benzol in Treatment of Leukemia.**—Koranyi reiterates here that his experience in six of eight cases of leukemia has been excellent; another patient did not tolerate the benzol and in the eighth case no benefit was derived from either the Roentgen rays, thorium or benzol. In the six favorable cases the whites dropped from 200,000 or 300,000 to 4,000 up to 12,000. The relative number of the pathologic forms materially declined, the patients were able to return to business, and one woman, received in a miserable condition, is now at the sixth month of a pregnancy and seems to be entirely well. Six other clinicians have reported nearly as favorable results. In all the cases the spleen subsided in size, with the swollen lymph-nodes, and the patients increased in weight. In one case the whites increased again to 24,800 by the end of the third month, but on resumption of the benzol they dropped again to 6,000. Pappenheim published an article in the *Wochenschrift* two weeks before in which he criticized the dosage given, theorizing that it was inadequate and reporting experiences with healthy rabbits injected with 0.03 c.c. benzol which showed severe injury of the kidneys and liver. But Koranyi comments that the conditions in healthy rabbits cannot be compared with those in leukemia in man, while Pappenheim's dosage was so very large that it readily explains the injury observed. Koranyi starts with this dose in a clinical case. Tedesko adds that he never witnessed any injury of the kidney or impairment of the general health at the maximal dose of 3 gm. per day in the clinic, but he appreciates Pappenheim's warning that danger is liable to result when too large doses are given. (See Billings' article in THE JOURNAL, Feb. 15, 1913, p. 495.)

Zentralblatt für Chirurgie, Leipsic

January 25, XL, No. 4, pp. 121-152

146 *Roentgenotherapy of Actinomycosis. R. Levy.
147 Transplanted Peritoneum Flap. (Zur Frage der freien Transplantation des Peritoneum.) A. Hofmann.
148 Technic for Suture of Large Hernias. (Zur Naht von grösseren Nabelbrüchen und ähnlichen Hernien.) Bertelsmann.
149 Contusion of the Pancreas. (Subkutane Pankreasquetschungen.) Hagedorn.

146. **Radiotherapy of Actinomycosis.**—Levy remarks that the kinship between the tubercle bacillus and the actinomyces and the frequent clinical similarity between the affections they induce suggest that the effects of exposure to the Roentgen rays or direct sunlight might prove as beneficial with the latter as with the former. He consequently applied the Roentgen rays in a case of recurring actinomycosis in a man of 41. There was profuse secretion from the lesion but this was arrested at once by the first exposure and the fistula healed up

within a few days. As the main focus had been excised in this case and large doses of iodid given, it was a question whether the benefit was due exclusively to the radiotherapy. In a second case a man of 35 was given no other treatment than the exposures when he returned with several fistulas a year after extensive resection of the cheek and upper jaw for actinomycosis. Under the Roentgen exposures, given with the same technic as for tuberculous lymph-nodes, the infiltration subsided and the fistulas soon healed. There has been no sign of recurrence in either case during the more than six months to date.

Zentralblatt für Gynäkologie, Leipsic

January 25, XXXVII, No. 4, pp. 121-152

150 Herpes Zoster in the Puerperium. H. Kunz.
151 "Hands Off the Uterus." ("Hand von der Gebärmutter.") J. Reich.
159 *Signs of Maturity of Fetus at Ninth Month. (Die Reifezeichen der Frühgeburt im 9 Monat.) R. Lutz.
153 Vacuum Capsules for Applying Heat in Chronic Pelvic Disease. (Zur Behandlung chronischer Beckenerkrankungen.) Hasse.

152. **Signs of Maturity of the Fetus.**—Lutz tabulates under twenty-seven headings various details in regard to the physical findings and the behavior of twenty-four infants born at the ninth month. He makes a distinction between "ripe" and "carried to term." Of the twenty-four prematurely born children only three were under 50 cm. in length and nearly every one had all the typical signs of maturity. His practical conclusion is that it is extremely difficult to determine the age of a newly born child from its physical appearance, and great caution is necessary in forensic cases. The length and weight show very little change during the ninth and tenth months. In the ninth month the corporeal development of the fetus is practically completed, the tenth month serves for the further development of the internal structures. His average in a thousand infants was for the eighth month, weight, 2,050 gm.; length, 48 cm., and circumference of the head 34; ninth month, 2,880, 52, 35; tenth month, 3,310, 54 and 37.

Zentralblatt für innere Medizin, Leipsic

January 25, XXXIV, No. 4, pp. 81-112

154 Electric Registration of the Movements of the Vessel Walls with the Pulse; the Electroangiogram. A. Bittorf.

Gazzetta degli Ospedali e delle Cliniche, Milan

January 9, XXXIV, No. 4, pp. 33-40

155 General Principles for Treating Extra Large Hernias; Seven Cases. (Cura radicale dell'ernia ombelicale e dell'ernia della parete addominale.) N. Trazzi.

January 16, No. 7, pp. 65-72

156 *Carbon Dioxid and Malaria. (Ossido di carbonio e malaria.) G. Cajozzo.

January 19, No. 8, pp. 73-88

157 Differential Diagnosis of Ovarian Cysts. (Cistomi ovarici voluminosi.) F. Marinelli.

January 21, No. 9, pp. 89-96

158 Anatomic Predisposition to Paralysis of the Sixth Nerve as Complication of Spinal Anesthesia. (Paralisi del sesto paio come complicanza della rachianestesia stovainica.) O. Tenani.

156. **Accessory Factors in Malaria.**—Cajozzo presents evidence to prove that a predisposition is necessary for the malarial plasmodium to settle in the blood-corpuscles. When the blood-corpuscles are healthy the plasmodium does not get a hold. Everything, therefore, that injures the blood-corpuscles favors malarial infection. Chief among the factors reducing the vitality of the corpuscle is carbon dioxid, whether derived from decaying vegetation or in crowded or defectively heated and ventilated rooms.

Semana Medica, Buenos Aires

December 19, XIX, No. 51, pp. 1281-1340

159 *Curable Forms of Acute Tuberculosis. (La tifo-bacilosis.) G. A. Alfaro.
160 Research on Plasmogenesis. (Nuevas conquistas de la plasmogenia. Los movimientos brownianos se deben a microorganismos.) A. L. Herrera.
161 Comparative Physiology of the Circulation. V. Delfino.
162 Experimental Tuberculosis at High Altitudes in the Andes. N. M. Villazon.

159. **Acute Curable Tuberculosis.**—Alfaro remarks that serofibrinous pleurisy in most cases is merely an acute tuberculous affection of the pleura, and the same may be said of many cases of pneumonia, peritonitis, arthritis, septicemia with endocarditis and even meningitis—each may be of bacteriologically confirmed tuberculous origin and yet the patients recover. The acute form to which he refers in particular has an onset suggesting typhoid to such an extent that Landouzy calls it typhobacillosis. Fever and moderate enlargement of the spleen persist but the temperature curve differs decidedly from that of typhoid. Outside of the hours of high fever the patient's general health does not seem much impaired and he eats with appetite. After six weeks, two months or more, the fever gradually subsides and the recovery becomes progressively clinically complete. Frequently, however, after a few months or even weeks, some tuberculous process in bones or abdomen, pleura, lungs or meninges becomes evident. Some typical cases are described, as for example, the case of a child of 3 or 4 who passed through the first phase suggesting typhoid fever without any local manifestation of the tuberculosis, then followed a period of convalescence and then cough and symptoms of asthma finally traced to a tuberculous lymph-node in the mediastinum entailing tuberculous pleurisy with slight fever for several months but finally terminating in apparently complete recovery with no signs of further trouble during the year since. In another case a pulmonary process developed before the fever of the first phase had entirely subsided, but in both cases the patient seems to have entirely conquered his tuberculosis. In other cases the children escape any secondary phase; one little girl of 4 had for over three months an irregular high fever with a spasmodic cough suggesting whooping-cough, foci of congestion in the lungs, emaciation and tachycardia; her two sisters had had a similar affection terminating in tuberculous meningitis, but the little patient in this case seems now to have entirely recovered, although there is no telling what the future may bring forth, as the cutaneous reaction to tuberculin is still pronounced. Landouzy has had only ten deaths among his more than 200 cases of this kind. In treatment the main point is not to make the mistake of putting the patients on the typhoid diet and keeping them confined in the house. Alfaro sends such patients to the country if possible, keeping them on a light nourishing diet with arsenic and iodids, persisting in the fresh-air course long after all the symptoms have subsided, hoping thus to ward off secondary trouble, and his experience has been very gratifying with this class of patients. He quotes in conclusion the saying of Claisse that nowadays we have to guard against undue pessimism while in the future the trouble will be to guard against undue optimism.

Ugeskrift for Læger, Copenhagen

January 23, LXXV, No. 4, pp. 141-180

163 *Permeability of the Pylorus After Gastro-Enterostomy. (Passage gennem Pylorus efter Gastroenterostomi og operativ Pylorusforsnævring.) A. Blad.

163. **Permeability of the Pylorus After Gastro-Enterostomy.**—Blad discusses the various methods in vogue for closing up the pylorus in doing a gastro-enterostomy and reports a case in which he folded in the duodenum and pylorus along the lengthwise axis with silk sutures, forming a roll about 6 cm. long, the size of one's little finger. The patient was a woman of 27 with an old chronic duodenal ulcer close to the pylorus, refractory to medical measures. On account of the danger of hemorrhage he considered it wise to close the pylorus entirely. Reexamination seven months later showed that the stomach contents were expelled mostly through the new opening, but that at the same time part passed out through the pylorus. The patient had been freed from all disturbances by the operation, and Blad has become convinced that this technic is the best under the circumstances, that is, a technic which closes up the pylorus for a time and thus permits the lesion to heal while allowing the pylorus to become permeable once more after all danger of irritation of the ulcer by passage of food over it is past. No technic in vogue seems to ensure permanent closure of the pylorus, and this may be an advantage.